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**The impact of the Papua New Guinea free education policy  
on the school executive's decision making in the  
management of class size.**

A thesis  
submitted in fulfilment  
of the requirements for the degree  
of  
**Masters in Educational Leadership**  
at  
**The University of Waikato**

by  
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**WAIKATO**  
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## **Abstract**

The Papua New Guinea National Government's directives on educational policies are expected to be implemented effectively throughout the country, in educational institutions that are solely or partly funded by the government. The Free Education Policy (FEP), also known as Tuition Fee Free Policy (TFFP) is a governmental directive that is implemented in elementary, primary and secondary schools. The implementation of FEP is perceived as a device for fulfilling the National Government's Universal Basic Education (UBE) Plan (Guy, 2009; Swan & Walton, 2014) that aims to provide formal education for children between the ages of six and eighteen. The 2012 implementation of FEP in secondary schools, created a significant increase in student population thus (Marshall, 2002) creating class sizes to exceed forty-eight students.

This study was conducted to explore how classroom teachers are assisted by school leaders in the management of large class sizes as influenced by FEP. Participants included ten school leaders from two separate secondary schools which are currently implementing FEP in the National Capital District of Papua New Guinea.

A qualitative research methodology was used, based on the interpretivist paradigm. Guided questions were deliberated and utilised in collecting data through semi-structured and focus group interviews. The data was collated then analysed thematically. The findings indicate that school leaders are very much challenged in assisting classroom teachers manage large class sizes. The main factors that appear to undermine the success of effectively assisting classroom teachers are inadequate facilities, insufficient resource materials and the shortage of teachers. The amount of time classroom teachers have for classroom preparations and presentations are also encumbered by the number of classes with large class sizes.

It was apparent that while the National Government's directive of FEP gives an opportunity for all school aged children to receive formal education, there are setbacks that impede effective implementation of this policy specifically in secondary schools. The implications suggest that as specialised teachers, classroom teachers need to be assisted in managing classes in overcrowded classrooms.

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Mi tok tenkyu tru long yupela olgeta.

## **Dedication**

I wish to specifically dedicate this thesis  
to my dearly beloved son

The late Nathaniel Tony ABADY  
Who peacefully passed on - 5th of May 2013.

Your 27 years was and is a blessing to your siblings, dad and me.  
Your great support and prayers for my travel abroad for studies  
Will always be a vivid memory treasured deep within my heart  
We are blessed to have had you as a part of our lives in  
Sharing the merriments, the uncertainties and the tears

*But we want you to know why you are the reason  
We try to be strong ..... whatever the season  
We know God and you are watching and praying  
Genuine smiles, strumming, singing and dancing  
If only..... only heaven had visiting hours  
I'd sail thru sunshine, and misty showers  
Reliving moments that were true  
In you my beloved son  
Pasin em yu*

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# Chapter One

## Introduction

### 1.1 Overview

In Papua New Guinea (PNG), the number of students in secondary school classrooms has increased significantly due to the implementation of the Free Education Policy (FEP) (Marshall, 2002). The free education policy, as directed by the government, allows children to attend school, tuition free, with school fees being subsidised by the government. The implementation of FEP is perceived as a device for fulfilling the Universal Basic Education (UBE) plan (Swan & Walton, 2014; National Executive Council [NEC] 2009) that had earlier been proposed by the government. This plan advocates the 'Education for All' goal that was agreed upon at the 1990, Jomtien, Thailand, Conference (Papua New Guinea Department of Education National Plan [DoE], 2004a; Guy, 2009; Avalos, 2006; Ravinder, 2011) in giving school-aged children equal access to good quality education (DoE, 2004). Therefore, as part of an election campaign in 2002, the Prime Minister of PNG, Sir Mekere Morauta, bid for the implementation of this policy (Marshall, 2002). Even though FEP was realised in the elementary and primary schools immediately after the election, its implementation in the secondary schools only came into effect in 2012 (Swan & Walton, 2014). This policy of school fees fully paid by the national government is made available only to schools that are either solely or partially funded by the government. These schools are referred to as public and agency schools respectively. Even though the initial decision for achieving UBE was to eliminate fees from elementary and primary education, secondary education has now been included in this changed policy (NEC, 2009).

According to the Papua New Guinea Medium Term Development Plan 2011-2015 (PNGMTDP), (2010) and O'Donoghue (1995) the national teacher-student ratio prior to the free education policy was, one teacher to eighteen students. However, according to the *Census Reports* (2011-2015), of the two schools in the study, the figures indicate that on average the teacher student ratio now stands as; one to twenty-eight due to the substantial increase in student population. This illustrates that enrolment figures have escalated thus creating a considerable increase in class

size (Swan & Walton, 2014). Based on this study, FEP has initiated an average class size of forty eight students per subject teacher.

Since this policy is a directive from the national government and therefore cannot be changed at the school level, those in the role of leadership needed to make changes in school policies and practices in order to accommodate it. Most importantly, since FEP caused a significant increase in class size, classroom teachers needed assistance in effectual management skills to successfully interact well with students in overcrowded classrooms. For these reasons, this study aims to explore the role(s) of the school executive, that is the: principal; deputy principals; and HODs in secondary schools in the implementation of this policy and to investigate how their role as school leaders influence the management of large class sizes.

## **1.2 The Context of this Research**

### **1.2.1. Geographic and Demographic Profile**

Papua New Guinea, which lies between Indonesia and the Solomon Islands, is geographically the largest island country in the Pacific realm, accounting for eighty-three percent of the region's land area and eighty percent of the total population of the Pacific (Adjaye & Mahadevan, 2002). The country's mainland and its six hundred islands have a total area of 463,000 square kilometres (Ravinder, 2011; Welsh, 2015). It comprises the eastern half of New Guinea, the islands of New Britain, New Ireland, and the Autonomous Region of Bougainville stretching from the south east to the north east of the main island of New Guinea (Ravinder, 2011; Welsh, 2015). The country, with its twenty-one provinces, is further divided into four regions. The: Highlands; Islands; Momase; and Southern regions. Because of broad ethnic classifications, the country is again divided into the highlands and the coastal areas (Thistlethwaite & Davis, 1996; Welsh, 2015). In addition, this island nation is covered with tropical rainforests, steep mountains with flat terrains, stretches of savannah and coastal flatlands (McMurry, 1993). These geographical landscapes often create obstacles to access basic government services as much of the country is still isolated, and in rural areas, living

conditions are generally basic (Welsh, 2015). Port Moresby being the capital city lies north of Australia and is on the mainland of PNG.

In 2009, the total population of Papua New Guinea was estimated to be 6.6 million (Welsh, 2015). Being the most linguistically diverse country in the world, PNG has over 800 known languages with English, Tok Pisin (Pidgin), and Hiri Motu (the lingua franca of the Papuan region), as official languages (Ravinder, 2011; Welsh, 2015). However, because English is taught in schools, it has become the language of politics, business and education (Connell, 1997). Since education has always been acclaimed as a tool for social change and development (James, Nadarajah, Haive, & Stead, 2012), the need to send all children to receive some form of formal education could have been seen as a major reason for the implementation of the free education policy.

### **1.2.2 The Issue**

The primary effect of implementing FEP was the increase in class size. Apart from using FEP as an avenue for UBE, there are other social issues that prompted its introduction. Eighty-five percent of the population who reside in the rural areas live off subsistence farming and among the fifteen percent who live in the city and towns, are unemployed youths who resort to petty crimes (Connell, 1997) because they are not in school or are unable to find some form of employment and therefore pose as a threat to political stability (DoE, 2002). Additionally, unemployed parents are also perceived as contributors to this problem as they are financially unable to send their children to school. Furthermore according to Marshall (2002) and Welsh (2015), a dilemma in the PNG educational system is that less than two thirds of the total population of young people from the age of fifteen and over can read and write and of the fifteen percent of the total population (Vltchek, 2013) who have had some form of education, eighty percent have not gone further than primary school (Ravinder, 2011). These are the age groups which are supposed to be in secondary school. “By 2007, many secondary school dropouts began to experience unemployment crisis” (Ravinder, 2011, p. 4), therefore, because of these contributing issues, the education structure was also changed (*from figure 1 to figure 2*), to allow young people to spend more time in

school in order to either gain additional skills for further education or to be able to make a living when they leave school (Connell, 1997). Marshall (2002) explains that Papua New Guineans do not receive any form of unemployment benefits and therefore have no financial means of fending for themselves if unemployed. For these reasons, education in Papua New Guinea has gone through major shifts and reforms (Mel, 2011) one of which is FEP.

Since the change to FEP, class sizes have increased, creating overcrowded classrooms in secondary schools (Marshall, 2002; Bray, 2007). Classroom teachers will have to deal with the amount of work that comes with the increase in class size. The kind of work that teachers would be expected to do would include: classroom preparations and presentations; extra-curricular responsibilities; and administrative duties (Lopez, 2007; Bray, 2007). Impediments such as limited resources and increased amounts of preparation and presentation time together contribute to poor class management (Finn, Pannonzzo, & Achilles, 2003; Lopez, 2007). Consequently, how teachers respond to this change in policy and how school leaders support classroom teachers to respond constructively to it constitute the issue that is to be addressed by this study. An expansion of the issue is presented in chapter two.

Therefore, the aim of this research is to analyse the perspectives of school executives in relation to the change in policy; by investigating: how school leaders communicate this change in policy to classroom teachers; how classroom teachers are supported and assisted in channelling this changed policy; and by identifying how the policy has impacted on the decisions school leaders make.

### **1.3 The Education System**

Together with a number of early established churches, colonial administrators instituted the education system from 1884 in Papua New Guinea (Ravinder, 2011). They operated independently until the 1970s when the current education system was established (DoE, 2004). Educational reforms, however, began in 1974, guided by the '*Matane Report*' (DoE, 2002; Guthrie, 2012) and over the years, that report has been the source underpinning the reforms of the education system

in Papua New Guinea. The *Matane Report*, from which stems the Papua New Guinea '*Philosophy of Education*' (UNESCO, 2011; Guthrie, 2012) is based on developing the integral being of every student or child. It is envisioned in the 2005-2014 *National Education Plan*, which states that: "‘Integral’ human development is achievable through an education system that is affordable and that appreciates Christian principles and cultural values" (DoE, 2004; Kim & Anderson, 2012).

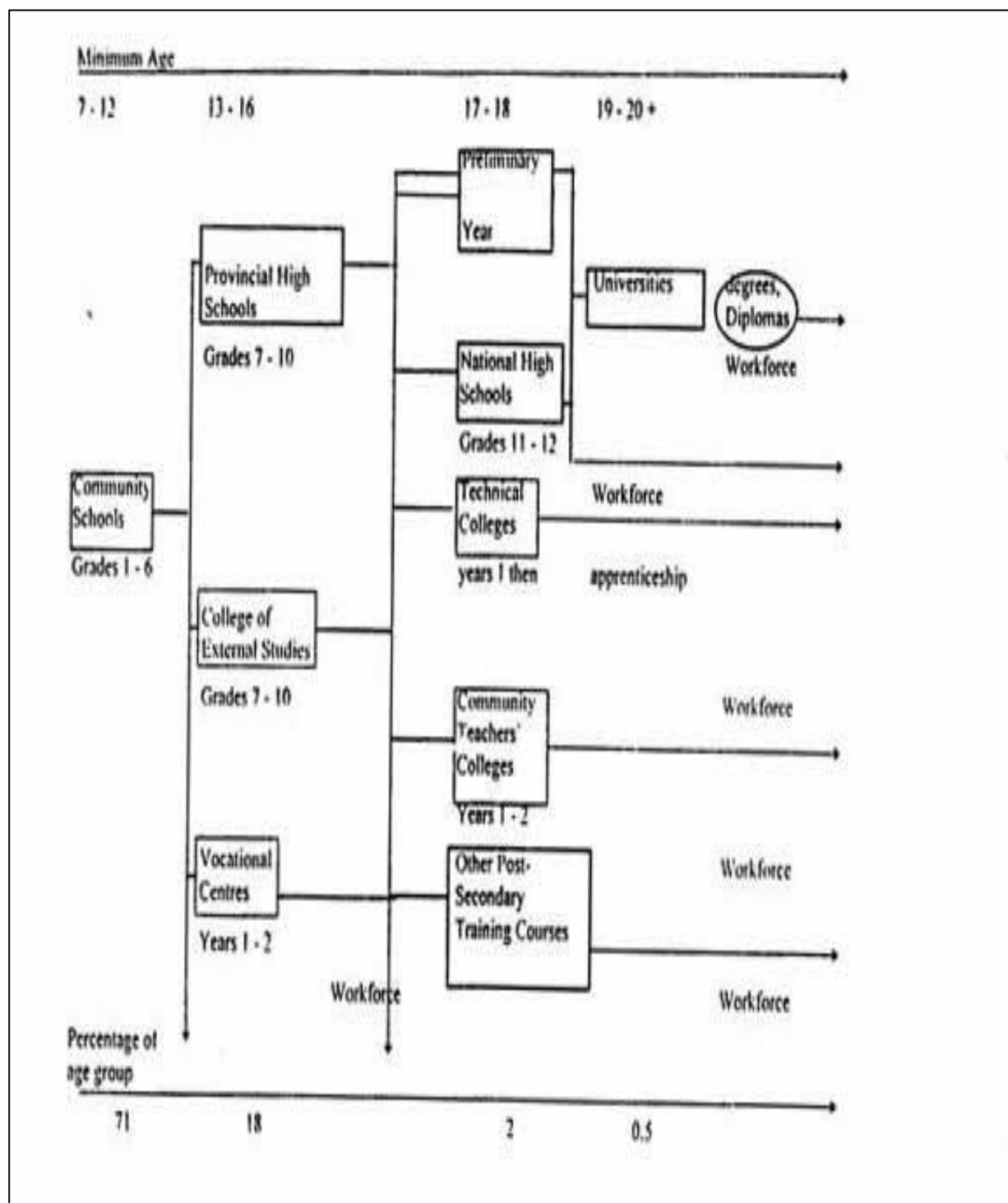
Bray (2007) asserts that because the 1984 Nations *Declaration of Human Rights* Article 26 states that "every child has equal right to education", the government, maintains that Article 26, will be achievable through the provision of free education. Furthermore, the issues of accessibility to and retention in education were obvious reasons for the change in the PNG education structure. This reformed structure came into existence in 1994 because it was seen that more access to education was essential to address the growing problem of unemployment (DoE, 2002; 2004).

The change in the Papua New Guinea education structure is presented below in ***Figure 1*** and ***Figure 2***.

This change in structure was from a '6 - 4 - 2 to a 3 - 6 - 4' (DoE, 2004). These figures mean that according to the old structure, students spent: six years in primary school; four years in high school; and two years in national high school. With the new structure students spend three years in elementary, six years in primary and four years in secondary school. The change also allowed children to begin school before the age of seven.

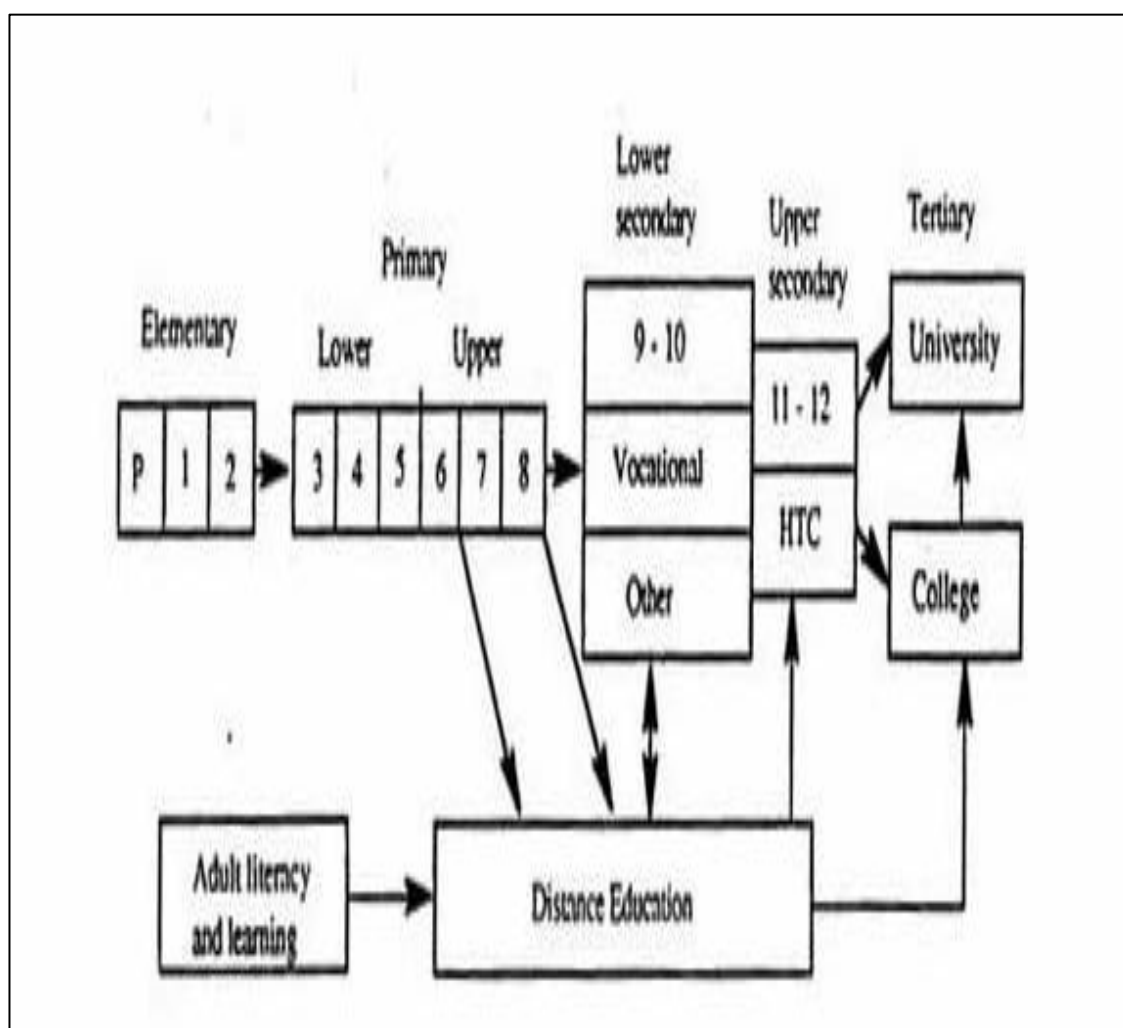


**Figure 1. PNG Education structure prior to 1994**



*(Department of Education, 1992)*

**Figure 2. PNG education structure from 1994**



*(Department of Education, 1992)*

Table 1 (*below*) is a projection of the school population by age and for selected years based on the National Census conducted in 2000. It shows the growing population of children attending school from elementary to year twelve. On the basis of the National Goals and Directive Principles (NGDP) and the Millennium Development Goals (MDG) (DoE, 2004), the Education Department has focused on developing a plan to provide access and quality education for all. One of the six ‘Education for All’ goals agreed upon by all nations at the Jomtien, Thailand, Conference is to ensure that by 2015 all children should have access to free education of good quality (DoE, 2004). As can be seen from the table below, children who are between the ages of fifteen and eighteen are the students attending secondary schools.

**Table 1. Projection of school age population by age, selected years, 2005-2014**

Age	2005	2008	2011	2014
6 years	165,185	179,196	194,460	211,033
7 years	160,775	174,391	189,230	205,357
8 years	156,489	169,722	184,141	199,834
9 years	152,324	165,185	179,196	194,460
10 years	153,224	160,775	174,391	189,230
11 years	149,116	156,489	169,722	184,141
12 years	145,123	152,324	165,185	179,196
13 years	141,244	153,224	160,775	174,391
14 years	137,474	149,116	156,489	169,722
15 years	130,941	145,123	152,324	165,185
16 years	127,407	141,244	153,224	160,775
17 years	123,974	137,474	149,116	156,489
18 years	120,639	130,941	145,123	152,324
Total	<b>1,863,916</b>	<b>2,015,205</b>	<b>2,173,378</b>	<b>2,342,139</b>

*(Department of Education, 2004)*

## **1.4 My Interest in this Study**

Having been a school teacher in Papua New Guinea prior to undertaking this research, I know that the school executive or those in the role of leadership in schools cannot change government policies. As an HOD in a secondary school I have been a member of the school executive team, responsible for providing in-service and for guiding other teachers within the department to adhere to the policies and practices that are part of the school's ethos. Before the change in policy, the class sizes were, on average; thirty-eight in grades eleven and twelve and forty-two in grades nine and ten. These figures are from the secondary schools where I was teaching.

However, I left teaching in the middle of 2012 to pursue my studies in New Zealand, six months into the implementation of the free education policy in secondary schools. That year, class size in many secondary schools where I taught, increased on average to over fifty students in the grade nine classrooms. Teachers

were not prepared for the workload that came with the significant increase in class size which resulted from FEP (Swan & Walton, 2014). Within my subject department there were setbacks and obstacles in catering for these large classes. We had to leave out some teaching activities because they were either impracticable with larger classes or resources were lacking.

We had to look at alternative ways of organising our teaching because of classroom space. Having to create teaching approaches that would accommodate large class sizes was not an easy task for us as a department. It was harder with the grade ten and twelve classes since part of the time was spent on preparing them for National Examinations at the end of each school year. The school had to organise time after official lessons to administer remedial classes since many teachers felt that they were not able to assist individual students during normal class time. Teachers who commute to school daily found it close to impossible to manage large class sizes effectively, given the increased amount of marking and classroom preparations.

Therefore, my interest in this research is in the educational leadership sector and how this role is exercised in Papua New Guinea secondary schools, with the recent implementation of FEP. This change in policy has contributed to a substantial influx of students (Bray, 2007; Swan & Walton, 2014), including students who had left school a year or two earlier and have returned to continue from where they had left off. As I am interested in the perspectives of those in the role of leadership in regards to this change in policy, this study stands to investigate how the schools' executive teams or school leaders communicated this change in policy to classroom teachers in terms of how teachers are expected to manage these large class sizes. This study also aims to explore how this change has affected the schools' policies and practices through the decisions that the schools' executives make.

## **1.5 The Significance of this Study**

In 2012, the Papua New Guinea National Government implemented the Free Education Policy in the secondary schools. This policy was implemented in the

primary schools as part of an election bid in 2002 (Marshall, 2002) and was subsequently extended into the secondary schools, ten years later. This funding is given to public and agency schools only and not to the private schools. As this was a government ruling, school principals and school boards had no choice but to take ownership of the policy.

The significance of this research is to identify the perspectives of the principals, deputy principals and HODs with regards to the increase in class size. It also aims to identify how this change in policy has impacted on the school practices and in the subsequent decision making that the school executive may have been faced with. There could be changes that the school principal and members of the executive team will have had to make to cater for these large class sizes. The issue here is not only how those in leadership (the school executive) view this change in policy but more importantly whether they are communicating their views with the teachers. In addition, this research will investigate how this change in policy has affected the school's executive decisions on school policy or policies. Johnson and Kruse (2009) point out that, making decisions that relate to making choices lies at the heart of leadership. Therefore in managing large class sizes there would be choices that the executive team would need to make when making decisions in regards to what is appropriate and applicable regarding teaching and learning strategies effective in the management of large class sizes.

## **1.6 The Structure of this Thesis**

This seven chapter thesis aims to investigate how school leaders in secondary schools perceive this change in policy and how they communicate the change to classroom teachers. The second chapter explains the issue that is being explored in this study. Chapter three examines current literature on the role of leadership in communicating this change in policy to teachers. The chapter also expounds on literature that justifies how school leaders can assist classroom teachers manage large classes through their decision making. The research design and methodology is presented in chapter four and includes the research methodology applied,

ethical considerations relevant to the research and a description of the research process used for the study.

Chapter five provides the findings gathered from the investigation. These are the results that illustrate the themes and ideas that have emerged as a result of this study. The sixth chapter is a discussion of the findings in relation to the literature in this area. Finally, the last chapter summarises the research, as well as highlighting limitations of this investigation and providing suggestions for further study, including recommendation to instigate change.

## **1.7 Summary**

The Free Education Policy is a directive from the national government of Papua New Guinea, and secondary schools that are either solely or partially funded by the national government began the implementation of this policy in 2012. The primary impact of the implementation of FEP is the considerable increase in class size. This study seeks to investigate how school leaders, that is, the school executive team, address the management of class size in their schools. The study also seeks to understand if the implementation has created changes to school policies and practices and if classroom teachers are assisted or guided by school leaders in managing large class sizes, including opportunities for teacher-student interactions.

The five main sections of this investigation include: i) the issue; ii) a literature review; iii) the research design and methodology; iv) the findings; v) a discussion of the results; and finally the conclusion.

## Chapter Two

### The Issue

#### 2.1 Introduction

*“It goes on to say that although the government “steers” the boat (policy), providing standards and utilizing framework for accountability, the movement (where it is going), depends on how the teachers and school leaders (who do the “rowing”) move that policy forward.”*

Caldwell and Hayward (1998, p.169).

This statement metaphorically illustrates how public or system secondary schools in Papua New Guinea operate. All policies and instructions that are directed by the government must be implemented by the schools. How the implementation helps the school to progress depends on the leadership of school leaders in guiding classroom teachers to implement the policy effectively in order to move the school forward.

Since the implementation of the Free Education Policy in 2012, class size in Papua New Guinea secondary schools has increased to fifty plus students per class, even in grades eleven and twelve. The funding allocated by the national government through its implementation of the Free Education Policy (FEP) is referred to as a school subsidy. A per capita subsidy is given to each school without considering the school's location and the availability of facilities, resources and teachers (Guy, 2009).

Most secondary schools in PNG indeed lack adequate resources, infrastructure and teaching staff to cater for these large class sizes. The challenge for those in school leadership roles is to determine how best they can assist the teachers, through the decisions they make, to be able to manage these large class sizes. As well as communicating this change in policy to teachers, those in leadership may be able to assist teachers to be more receptive to this policy change and to be able to manage these larger class sizes with ease.

## **2.2 The Policy**

### **2.2.1 Fee-Free Education**

In many parts of the world, the notion of fee-free education has generally been accepted as a creditable social goal and has been very much supported by the United Nations and the World Bank (Bray, 2007; UNESCO, 2011). Financial funding by UNESCO, UNICEF, INDP and the World Bank was given to the many campaigns that were carried out in launching this fee-free education policy (Bray, 2007; UNESCO, 2011). The United Nations (UN) *Declaration of Human Rights* Article 26 states that: “Every child has the right to education and education shall be free for elementary and/or fundamental stages” (UN 1973, p. 3).

In addition, the 1966 *International Convention on Economic, Social and Cultural Rights* also states that: “Secondary education should be made available and accessible to all, especially in the progress of introducing the free education policy” (Bray, 2007; Guy, 2009).

### **2.2.2 Free Education in Secondary Schools**

For this reason the PNG government, like other third world countries, has been very much concerned with the increasingly popular demand for academic secondary education which is said to have grown beyond the absorptive capacity of the economy (Bacchus, 1984). Economic impacts and ideological stances have changed over time (Bray, 1987; Guy, 2009; McGrath, 2010) and these factors have enforced policy changes by creating an increase in academic enrolments to meet economic growth, and encouraged the implementation of FEP in secondary schools. In addition, because of the low wage scale of a developing country such as PNG, there is an increase in demand by parents for the kind of education which leads to better paid jobs in the modern sector (Bacchus, 1984; Guy 2009). Therefore, the implementation of FEP led to a significant increase in enrolment figures.

This second table presents the actual intake from 2011 - 2015 in the two secondary schools that participated in the study.



**Table 2. Enrolment figures in the two secondary schools of this study.**

Year /	School A					School B				
Grade	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
9	180	225	207	222	240	222	230	229	240	245
10	199	185	214	280	275	214	219	220	231	224
11	140	138	153	149	161	123	120	126	122	130
12	114	136	140	123	122	119	117	122	120	123
<b>TOTAL</b>	<b>633</b>	<b>684</b>	<b>714</b>	<b>774</b>	<b>798</b>	<b>678</b>	<b>686</b>	<b>697</b>	<b>713</b>	<b>722</b>

(Census Reports 2011 -2015)

## **2.3 School Leadership and Decision Making**

### **2.3.1 Class Size**

According to the proposed *National Education Plan 2005 – 2014*, the enrolment rate for grades nine and ten is 26.2 percent while grades eleven and twelve remain constant at 6.6 percent (DoE, 2002; 2004). However, since the implementation of FEP those figures have slightly increased. On the table above, which presents the enrolment figures in the two secondary schools of study, it is apparent that the total number of students per secondary school has increased rapidly over the last five years. This therefore shows that the class size average has escalated.

### **2.3.2 Class Size Management**

Secondary education in Papua New Guinea is a four year programme. It is divided into lower secondary (grades nine and ten) and upper secondary (grades eleven and twelve) (UNESCO, 2011). With the influx of students, the issue of classroom space has made it quite difficult to change the class sizes. Even though teachers manage these large classes singlehandedly, how they do it should be a combined effort between the teacher(s) and the school's leadership. Moreover, secondary school classrooms are made up of diverse learners. The range could be greater if the size of the class is large. Classroom management allows teachers to be receptive to diverse students (Alton-Lee, 2003).

In addition, many of the secondary schools in Papua New Guinea are quite small in terms of infrastructure. The science laboratories or arts rooms, for example, can

cater for only a small number of students at a time. Teachers therefore need to be assisted on how a large number of students are best organised to avoid overcrowding, and so that they have easy access to move out in an emergency. For these reasons, teachers need to know how they can be able to manage these large class sizes successfully. Therefore, the management of class size, especially if the class is large, should be discussed, and teachers should be supported.

### **2.3.3 School Leadership**

In many of the secondary schools the role of school leadership is left to the school executive team. This consists of the school principal, the two deputies and the heads of departments. In some secondary schools the subject masters are also included as part of this team. Even though the principal is referred to as the formal leader, the distributed leadership model (Spillane, 2003) is practised by the executive team. Although the school principal is the formal leader, most decisions are made by the team and not just the individual. How the school is organised to run its daily activities is often left to this team. Therefore, the essence of being in leadership is being able to make decisions that are in alignment with set directives and, at the same time, are practical (Johnson & Kruse, 2009).

### **2.3.4 Decision Making and Its Impacts**

Policies are implemented by the schools. However, these policies are directives given by either the national or provincial government. Any directive from the national government is carried out by all system and or agency schools in the country; for example, FEP is a directive from the national government. According to the *National Education Department 2003 Annual Report* (2004), specified policies for education include an increase in access to education at all levels by 2015.

When these decisions are a directive from one group but implemented by another, the impacts can be either positive or negative. The outcomes of a decision will depend on the rigour of any feasibility study into the proposed plan. In the Enga province, for example, many students were sent away due to a shortage of classrooms and teacher accommodation (Marshall, 2002). As also experienced by

a number of African nations, a standard of education already low before the FEP deteriorated further when the policy was implemented in that area (Bray, 2007). Madsen, Schroeder, and Irby (2014) conclude that school leaders must be made aware of how they can be of assistance to teachers in building capacity to improve the standard of the school.

## **2.4 Summary**

The significant increase in class size in secondary schools is the primary outcome of the implementation of the Free Education Policy. This increase may affect the roles of school leadership and the management of class size. The increase may also have an impact on the kind of decision making made by school leaders in relation to school policies and practices. School leaders may have to make decisions regarding how large class sizes are managed. They may also have to consider enhancing skills in teaching and learning strategies that are accommodative to large class sizes.

## **Chapter Three**

### **Literature Review**

#### **3.1 Introduction**

This chapter reviews literature on educational leadership and its role in class size management, its response to policy development and its impacts on school policies and practices. This literature provides the underpinning context of this study. The first section focuses on literature relating to policy development and its effects on class size, school policies and practices. Subsequently I elaborate on the role of school leadership in communicating this policy change and its development to teachers. I also discuss the impact of this change to the well-being of the teachers, the availability of school facilities and the accessibility of resource materials

#### **3.2 Policy Development and Its Impact**

##### **3.2.1 Policy Development and Implementation**

In organisational institutions, policy is politically motivated. It is about the power to: determine what is to be done; who is to benefit; what its purpose is; and who is to pay (Bell & Steven, 2006). Policies as explained by Heiman (2012) are: “Formed and reformed in government and bureaucracy and reformed again in the work of institutions through their management, administration, teaching, and learning” (p. 372).

The term “policy” as used in education is defined as a political process that translates ideas, purposes and intentions into a set of objectives or aims that guide the functions and existence of learning institutions (Levin, 1989; Cooper, Fusarelli, Randall, & Vance, 2004). Bell and Stevenson (2006) add that anyone working in a learning institution must make sense of policy contexts and act in response, since they are tasked to implement the policy directive. Policy changes and implementations are bound to happen at any time in any organisational settings, including schools. This is because teachers’ roles in educational institutions or schools are “complex and demand flexibility and adaptation to situational changes”

(Ben-Peretz, 2009, p. 55). The per capita school fee subsidy is given by the government to each school without considering the: availability of facilities; resources; or the school's location and number of teachers (Hoyle & Wallace, 2005). It is therefore, argued that the subsidy should include: infrastructures; modern teachers' houses; and libraries to improve the country's level of education ("Education Policy Not Working Well", 2015).

In Papua New Guinea, public and agency schools implement various reforms that are directed by the National Government since the government gives funding to operate these schools (Marshall, 2002). The Free Education Policy (FEP) was introduced into the country in 1982; however, it did not make education totally free. The school fee was only partially subsidised by the government, and parents continued to pay a percentage of the fee (National Research Institute Report [NRI], 2004; Guy, 2009). These educational reforms were directed at improving the accessibility for better education for children (UNICEF, 2013; Avalos, 1993). The key concern with regard to developing and implementing this policy in the PNG schools was the need to keep children in school and at the same time uphold values of equality and fairness (Avalos, 2006). However, policy makers who pass these directives need to be aware of the possible negative effects of these modifications and therefore have strategies in place to modify these policies (Rosekrans, 2006).

When presenting funding to schools in the Southern Highlands province of PNG, the Prime Minister said the government's aim of the free education policy was not only to get more children into schools but also to ensure that the schools were appropriately resourced ("Government Committed to School Upgrades", 2015). In another newspaper article (Issac, 2015) the Prime Minister states that there was no need for schools to close since K300m (US\$111m) had earlier been released for free education. He was responding to media reports that over thirteen thousand schools had opted to close due to the lack of operational funding. Kapin (2015) adds that the governor for Morobe Province encouraged school leaders in his province to refrain from causing anxiety amongst students and parents regarding schools' closure due to the lack of operational funds since he was certain that funding would be made available.

While commending the government for initiating FEP, the former chairman for Coffee Industry Corporation (CIC) expressed that there have been more negative than positive implications since the inception of the changed policy (“Education Policy Not Working Well”, 2015). Iningi (2015) contends that the current changed policy is not the best policy to produce human advancement. He adds that this policy is a concept of mass production of inexpensive and unqualified human resources in the country. In addition, the Opposition party argues that the government has lost control of the management of FEP in the country (Belden, 2015). They claim that even though the policy is good, there is need for strategic planning to sustain FEP to facilitate future young Papua New Guineans not being disadvantaged from a short-term arrangement. FEP has also created corruption as it has been reported that K6.9m was paid out to “ghost” schools or schools that are not in operation (Iningi, 2015). The government has also been called to address the inclusion of children with disabilities in this changed policy (Waketsi, 2015). Since these children have the same rights and needs as other children, it is important that their needs are also attended to. This can be crucial in overcrowded classrooms.

One other problem that FEP has brought is that some schools, for example in the Morobe Province, have been reported for inflating their enrolment figures with the intention of receiving more money from the government (Kivia 2015). Schools are doing this because they have been instructed not to collect project fees from parents. The government could avoid these corrupt activities if the intended School Survey Data Report (SSDR) is completed and attended to (Waketsi, 2015). In that report, the PNGTA General Secretary stated that the SSDR is a vital document that determines how the government meets the financial needs of individual schools.

Many schools are concerned that FEP has created a considerable increase in class size with insufficient support from the government (Salmeng, 2015). Waketsi reports that this is currently happening throughout the country where classrooms are overcrowded and lack basic facilities such as chairs, desks, and sometimes even teachers. Asombo (2015) adds that the Lagos State Government’s provision of FEP for the last sixteen years has increased the number of students in schools and used up millions of dollars but has not put an end to the myriad problems that

are faced by the education system. The newspaper report (“Education Policy Not Working Well”, 2015) explains that the Free Education Policy has created countless setbacks to the delivery of high quality education and that a call has been made to relevant authorities to review the policy.

Nicholas (2015), on the other hand, reports that since the introduction of the FEP more girls are attending schools throughout the country. He adds that the implementation of this policy has nearly doubled the number of students to approximately two million, which shows that a large number of girls are benefitting. In a newspaper article, Elapa (2015) reports that a school in PNG has thanked the government for the changed initiative and would like the government to legislate the policy even though they identify that the policy is not working. Primary schools in the country are using television programmes for classroom teaching. Yafoi (2015) describes the use of television programmes as an initiative implemented in schools to enhance teachers’ teaching and children’s learning capacities, especially in large classes, since PNG has seen a rise in the education population due to FEP (“Institute Backs Growth of Education”, 2015).

Cooper et al. (2004) argue that the success of a given directive or policy will depend largely on how effectively that policy is being implemented. At the same time the availability of school resources may influence the success of policy implementations (Ramirez, 2013). Consequently, the development of policies in schools depends on how teachers, parents, the school board and most importantly the school leaders implement them. Heiman affirms that the success of policies can be recognised through meticulous conceptualisation and examination of their practices (2012). As Bell and Stevenson (2006) affirm, the environment of any learning institution is greatly affected by how these policies are implemented. The way the school executive views this change in policy will have an impact on how the teachers respond to it. This may mean that if school leaders are not active in applying policy changes and class management strategies that would accommodate this change in policy then teachers may not implement this change efficiently. Hargreaves and Fink (2006) assert that educational changes which would include change in policies are easy to propose but may be difficult to implement, especially if school leaders are not communicative and teachers are unresponsive.

Hoyle and Wallace (2005) claim the logic of meeting the needs of the students is partially unpacked in the official aims and goals of the implemented policy. O'Donoghue (1995) points out that because the government was unable to provide enough schools for all students to access, creating compulsory education would not be regarded as an option since funding to build more schools to cater for the growing school age population was an inescapable problem. Moreover, in Papua New Guinea, the government continues to use a substantial amount of the school subsidy for operational costs which cannot be met by the department's regular budget, such as running staff development programmes, supporting national examinations, or meeting travel expenses for school inspectors (Guy, 2009). Gannicott (1987) explains that one of the pressing issues in education that was confronting Papua New Guinea at the time was that less than two-thirds of the total population under the age of fifteen could read and write. Being illiterate meant that people would be unemployed, which led to poverty. Curtin and Nelson (1999) affirm that another year of extra schooling meant that the probability of poverty would be decreased by 1.6 percent.

Another reason for implementing FEP is that Papua New Guineans do not receive unemployment benefits (Marshall, 2002). If students were able to continue to secondary school they could become more skilled and be able to take care of themselves. The change in policy is also seen as a tool to alleviate the rate of illiteracy in PNG. To encourage students to continue their studies, the National Education Department put together the *Plan 2005 – 2014* as a guide in preparing citizens to be skilled and literate, enabling them to be able to take care of themselves and at the same time be prosperous in nation building (DoE, 2004). The annual Conference of Education Ministers' Council and the National Education Board (NEB) play a vital role in the policy making and endorsement of policy decisions in the PNG education system (Guy, 2009). Once this team validates the implementation of educational policy changes, it would then be up to school leaders to ensure that directives are enacted.

Therefore, since educational policies change over time and the process of change is complex, group effort, open discussions, continuous dialogue between school leaders and teachers and precise decision-making are the keys to successful policy implementation (Rosekrans, 2006). Discussions around school policy changes,



changes in school routines and practices, subject allocations and teaching load are vital school elements that need to be addressed by school leaders and teachers, especially if they are going to be affected by the change in policy. It is the responsibility of the school leaders to ensure that directives from the national and provincial education department result in positive outcomes. This will depend largely on how policies are developed in schools.

### **3.2.2 Impacts on School Policies and Practices**

When schools are directed to implement government policies, the implementation is expected to create a change in the organisation and the running of the school, often depending on what the directive is. Collective decisions may be necessary to accommodate these changes. Often the changes could impact on the existing school policy or policies and practices. For example, implementing the Free Education Policy means that the government pays subsidy for each student. As noted above, the value of that amount does not take into consideration the location, availability of materials and resources, availability of class teachers or the general cost of providing education (NRI, 2004; Swan & Walton, 2014). This means that unlike a school in the city, a school in a remote area of Papua New Guinea does not have to pay for the use of power. Unlike a boarding school, school leaders in a day school do not have to be concerned about buying food for the students. Simultaneously, because of the large number of students, the heads of each subject will have to work with the teachers within their departments on what they would need to exclude or include as part of the departmental policy in order to accommodate this change.

Changes in policy may have an impact on school practices. For instance, FEP has produced a significant increase in enrolment and as a result many schools find they have inadequate resources (Guy, 2009). Bray (2007) points out that education is never free as families still have other costs to deal with, such as school uniforms and resource materials. Again in PNG parents are asked to assist their school by buying resource materials for their children. In many of the practical lessons, students are required to bring their own fabric for sewing or food for cooking and even chart paper for art work. In a boarding school, students

are required to bring their own working tools as there would be a limited supply at the school. Increased rolls and larger classes could mean limited access to sports equipment or work tools, and this could influence school leaders to propose new out of class activities in order to allow active participation by all students. Clearly the increase in class size may influence the practices and policies of the school if it is accompanied by a lack of learning and teaching materials and tools and equipment.

### **3.2.3 Impacts on Decision Making**

Adams and Krockover (1998) explain that the implementation of policies facilitates decision making in terms of action, emphases, and allocation of resources (p. 708), thus serving as a guide to achieve a goal. They add that the impact of policy determines not only decisions that are made at the present time but also those made in the future. As with any operative organisation, school leaders are tasked to plan and decide on how the institution is to function and progress. School leaders can easily influence teachers through the decisions they make (Blase, 1993).

In making decisions relating to class and subject allocation, those in the role of leadership need to be consistent, approachable, and mindful of how much teachers can handle. School leaders should also be willing to take on an active role in the in-service development of teachers (Vulliamy, 2006). School leadership has to be defined and vibrant. School-wide communication between school leaders and teachers on the subject of school organisation has to be transparent otherwise the school leaders get the blame if something goes wrong (McBeth, 2008; Alcorn, 2011). These actions are crucial in the management of class size. School leaders need to ensure that the decisions they make are clearly communicated to the teachers.

In Papua New Guinea, secondary school students in grades ten and twelve sit for the National Grade Ten and Grade Twelve School Certificate Examination at the end of the school year. Despite the large number of students in these examination classes, school leaders need to ensure that the school is able to produce a high mean rating in the National Examinations and so set a benchmark that is evidence

of committed teaching and learning. This could depend on the kind of decisions they make with regard to how these students are guided in preparation for these examinations. Johnson Jr. and Kruse (2009) declare that making decisions lies in the heart of leadership. It would then be the core of the role of leadership as the success of schools depends on the kind of decisions made and how they are carried out.

Hoyle and Wallace (2005) assert that cooperation amongst teachers is both the subject and object of change as it is the view of policy makers that change is achievable through the collaboration of teachers via their participation in decision making. Attending to what is vital to the smooth organisation of the school will also depend on the kind of decisions that are made (Lakomski, 1987). Wranga (2014, p. 11) reports that despite funding constraints a group of secondary school teachers from Kiunga North Fly District discussed key strategies to improve education standards in the Western Province. Schools are going out of their way to develop practices in dealing with this change in policy as they are aware that they need to take action in order to accommodate this change. In addition, (“School Gets Tanks”, 2015, p. 13), Salamaua High School’s decision to purchase twenty-four water tanks was based on the fact that because of the large number of students, and its location, this was the best option the school could take to keep the school operating. Therefore, when leaders make quality decisions that highlight issues that are the essence of progress and growth of the school, then this form of leadership is embraced by those affected by the change (Johnson & Kruse, 2009).

### **3.3 School Leadership**

#### **3.3.1 The Role of School Leadership**

Leadership can well be identified as a “living force” within an organisation; it is the human drive for change that takes the organisation to the next level. Leadership is also recognised as the influence that shapes the environment of the organisation (Lawn, 2013). Osborn, Hunt, and Jauch (2002) add that “leadership and its effectiveness is largely dependent on its context” (p. 797), as they explain that the role of leadership cannot be separated from the context in which it is

practised. As described by Caldwell (2006) educational leadership refers to the ability to nurture a learning community; it can also be defined broadly to include a nation, a state, but particularly a school. In education, the role of leadership is very much aligned to creating change through collaboration with colleagues. Educational leadership is interconnected, with skilful people who are advocates for change to make better their institution (Marx, 2006). This means that in distributed leadership, leaders work alongside subordinates to create change within the school environment for a better future. Members of the team could be either internally or externally associated with the institution. Preedy, Bennet, and Wise (2012) point out that leadership in education should focus on manipulating the contextual factors within the institution to build a platform for future influence.

The two main styles of leadership that are apparent in PNG secondary schools are transactional leadership and transformational leadership. Some schools use one style or the other while other schools use both styles. Transactional leadership relates to the style of leadership in which an exchange takes place between the leader and the follower (Gardiner, 2006). The role and functions of transactional leadership are assigned to the person who has been designated to hold formal office, such as the school principal. This style of leadership is more concerned with: maintaining a normal flow of operations and uses disciplinary control and an array of incentives to influence employees to perform their best (Ingram, 2013). For example, if a follower effectively completes a set task as instructed by the leader, then the follower is rewarded. The rewarding by the leader could be either material or a verbal or written praise. On the other hand, Burns explains that transformational leadership embodies a mutual relationship that elevates followers to becoming leaders (as cited in Gardiner, 2006). Transformational leadership encompasses “shared” and “distributed leadership”. The role of leadership is distributed or shared with other members of the institution who are capable of overseeing the progress of the school. Bryant (2003) explains that transactional leadership illustrates the ability to inspire and “motivate followers largely through communication of high expectation” (p. 36).

The role of transformational or distributed leadership is therefore a shared responsibility and is not left to only one person (Harris, 2003). Leadership as practised in the two schools who participated in this study was distributed

leadership as the leadership team consisted of the principal, the deputy principals and the heads of the different subject departments. They were referred to as the school executive. Working together as a team, school leaders can realise the school's vision through its mission. By combining initiative with constant dialogue, members in the team ensure that they identify themselves with the learning process and progress within the organisation. Taylor and Cava (2011) emphasise that the paramount role of school leadership is to improve the achievement of students in the school. School leaders set the path for the organisation by making deliberate plans; they motivate, inspire and make new things happen so that the institution moves forward (Hoyle & Wallace, 2005). Hallinger and Heck (2010) add that school leaders need to work with teachers to make collective decisions concentrating on the educational development of the school. Gronn (2003) affirms that leading and managing are work practices that are considered to be challenging.

School leaders have identified that they need knowledge, skills and the right kind of attitude to help them address contextual changes (Blase, 1993; Alcorn, 2011). School leaders have a vital role in delivery teaching and learning practices that are applicable and manageable. Bass, Avolio, and Goodheim (1987) and Blase (1993) recommend that those in leadership roles carry out study or research on how other leaders invigorate and galvanise their subordinates. This could help them develop tactics with which they can best carry out their role as decision makers even though Gorard (2005) however, argues that the problem is not about deciding on what method to use but it is using the strategies that will work to successfully implement the policy. This argument is an area of consideration for school leaders in decision making.

The role of Papua New Guinea secondary school leaders is to carry out directives stipulated by the National Education Department and the Provincial Education Board. Despite this, school leaders have created their own school policies where they see them as pertinent for the smooth running of their institution (Guy, 2009). Carrying out state directives is not an easy undertaking for school leaders. Kelegai and Middleton (2002) and Brydon and Lawihin (2013) confirm that eighty-five percent of the total population lives in rural areas, making it difficult to implement policies effectively.

### **3.3.2 Leader- teacher Communication Links**

The success of a school depends on the performance and effectiveness of school leaders or school executive, and how they relate and associate with the teachers in the school (Bell, Bolam, & Cubillo, 2003). A crucial component in being motivated in doing what is appropriate for students is to understand how teachers respond to the leadership practices in their school (Leithwood, Jantzi, & Steinbach, 2002; Leithwood, Pattern, & Jantzi, 2010). It is the responsibility of school leaders to ensure that the change in policy is well cultivated (Ball, 1998) and this can be done by creating a well-established communication link with teachers. Alcorn (2011) explains that school leaders, with the help of teachers, need to negotiate their way through national policy changes to perceive what is best for the students.

High quality decision making requires that leaders communicate information, views, concepts and goals clearly and knowledgeably and provide the inspiration to realise individual and shared vision in an operative and applicable manner (Buchholz & Rosenthal, 2005). Kruse and Johnson Jnr (2009) add that being focused, competent and consistent are the key requirements for developing, guiding, implementing and directing others to realise that these directives rely on good decisions that are made on a routine basis and over time. Ball (1998) points out that addressing these requirements is a challenge faced by all those in the role of leadership.

### **3.3.3 School Leaders and Teacher Support**

Bell and Stevenson (2006) point out that those in the role of leadership in educational institutions not only implement governmental policies but also generate them. Harris (2009) adds that one of the ways in which school leaders can support teachers adopt new practices and instructional changes is to clarify to them what kind of instructional strategies are valued, useful and appropriate for their school. Pickford (2014) suggests the need for teachers' "self-evaluation" through reflective writing. This exercise could help teachers identify their strengths and weaknesses in attending to large class sizes. The success of the school also depends on how school leaders attend to certain aspects of the school

(McBerth, 2008; Bell et al., 2003; Foskett & Lumby, 2003). Often teachers are hesitant to take on board changes that will impact on their classroom presentations. Reasons that could validate this unwillingness could vary depending on the location of the school and its environment, the amount and kind of resources the school has and most importantly, if teachers are confident in handling and implementing the change. The need for school leaders to work directly with classroom teachers is an important part of managing large class sizes (Foskett & Lumby, 2003).

Furthermore, Simonsson and Munoz (2012) and Hallinger and Heck (2010) believe that a positive influence in ensuring that these new practises and instructional changes are carried out successfully is the mentoring of others within the organisation. Having a mentoring system assures that teachers are well guided and supported. School leaders have an essential role in mentoring (Kilburg, 2007). Holloway (2001) and Arthur, Davidson, and Moss (2003) find beginner teachers and teachers who have little experience in a certain subject need to be guided by experienced teachers. Classroom teachers would therefore need the support of school leaders through mentoring, which will support their professional development (Arthur et al., 2003). Hallinger and Lee (2014) conclude that national educational reforms cannot be achieved at the school level without active involvement by school leaders.

In the PNG secondary schools, giving class teacher support would be a lot easier if it were done through shared leadership (Hallinger & Heck, 2010) and implemented as one of the roles of the executive team since shared leadership allows for open discussion and collective planning. Once school leaders decide as a team on what works in implementing a policy they are able to create teaching and learning strategies with other teachers. This could be vital in supporting classroom teachers manage large class sizes, especially if these teachers feel that they are overloaded. Leithwood et al. (2010) emphasise that efficacy depends on collective confidence among teachers. Through continuous dialogue with those in leadership, classroom teachers can be given assurance in effective management of large class sizes. To provide opportunities and inspire and energise teachers to be creative and responsive in managing large class size is therefore a leadership challenge (Mathews, 2009). Thus it is crucial that school leaders work closely

with classroom teachers in effecting such reforms. Bubb and Earley (2004) conclude that “to assist in overcoming resistance is ensuring that teachers are given sufficient information about the change and its desired effects” (p. 38). A lack of information and an unawareness of the effects that change could bring could lead to frustrated teachers who might not respond constructively to this change in policy.

### **3.3.4 Human Resource Enhancement in Policy Development**

It is generally recognised that the principal, who is seen as the formal leader of the institution, takes the lead in the implementation of educational reforms or policies (Hallinger & Lee, 2014). The role of taking the lead in PNG secondary schools is entrusted to the executive team. Successful implementation of these policies will depend on clear channels of communication between the team and the teachers for better class management. Therefore, it is crucial that the teacher is seen as a vital source to the teaching space learning environment (Bossert, Dwyer, Rowen, & Lee, 1982). Teachers would certainly support decisions targeting the increase of knowledge in the use of resource materials for classroom teaching, training proficiencies for teachers and supporting teacher enhancement (Johnson & Kruse, 2009). Sparks and Hirsh (2000) maintain that teachers need time to learn and develop in order to meet the expectations imposed on them and thus be able to address the challenges. Bubb and Earley (2004) state that a key role in the change process is not only to implement the change but to train and develop teachers so that they know how best to implement the change. Waketsi (2015) explains that with FEP, children with special needs are educated under the same system with everybody else. It is crucial that teachers are trained well to meet the needs of students with disability.

Nevertheless, the lack of qualified teachers is still a matter of concern in PNG secondary schools (UNESCO, 2011). Even though secondary school teachers are trained to take one or two subjects they are often required to take at least one more, especially if there is a shortage of teachers in the school. The Department of Education (2005) affirms that the recruitment for more teachers into schools in PNG is still a challenge for the Department. To better equip teachers to take on



more than they had been trained for can be done through organised meetings and in-service programmes. Departmental meetings, both formal and informal, are a common occurrence in schools. Jennings (2007) affirms that teachers and school leaders should get together regularly to analyse development, deliberate on the problems and create solutions to manage the issue of improving the quality of classroom management.

Leithwood, Louis, and Anderson (2004) maintain that there is great concern about the teaching load given to teachers. This could affect the quality of lesson preparation and presentation. Secondary schools in Papua New Guinea may not have the manpower or specialised teachers to attend to the specific needs of students (Agigo, 2007) which would impede effective policy implementation. Vulliamy (2006) indicates that style and quality of teaching conclusively affect the standard of education. If teachers are not supported through human resource enhancement in effective classroom presentations, then they may succumb to poor teaching delivery. Avolos, (1992; 1993) and Guy (2009) assert that teacher training plays a vital role in effective policy implementation. However, despite the fact that teachers contribute significantly in the development of PNG, facilitation of teacher training and development programmes is very poor (Agigo, 2007). Yet according to the *National Education Department 2003 Annual Report* (2004), there is now greater access to teacher training in the country.

Gardner and Schermerhorn (2004) contend that willingness to accept and carry out responsibilities are evident in organisations that are well run and managed. Good management will include the professional development and assistance given to those working within the organisation. Teachers need to be helped to understand how this change is to be implemented. Alton – Lee (2003) adds that teaching styles are crucial elements of effective learning. It is therefore important that teachers are well instructed in the use of teaching approaches that are applicable to large classes. For this reason Bottery (2004) explains that secondary school teachers should be multi-trained to teach more than one subject, to avoid “baby-sitting” a class in the absence of another teacher. In Papua New Guinea, school inspectors are responsible for support and teacher professional development (UNESCO, 2011) in the secondary schools and would therefore need to ensure that school leaders are helping teachers enhance skills and

practices in class size management. Tienken and Achilles (2005) reiterate that the concept that teacher quality is the core of educational reforms has been acknowledged by educationalists. Ben-Peretz (2009) concludes that as in many countries, the Papua New Guinea Ministry of Education is accountable for equipping schools with teachers, nationwide. Educating teachers is an important part of this responsibility.

### **3.4 Class Size Management**

#### **3.4.1 Class Size**

As noted, a significant increase in class size was the noticeable outcome when the Free Education Policy was implemented (Bray 2007). As a result, the size of the classes as well as the size of the schools is inconsistent with the number of teachers employed due to the availability of teachers (Vulliamy, 2006). This is because there is only one secondary school teacher-training university in the country. The classrooms used today in many Papua New Guinea secondary schools are the same rooms that were used five to ten years ago when classes numbered fewer than forty-five. Finn et al. (2003) and Finn and Achilles (1990) point out that class size must affect how well a teacher is able to manage student participation, student-teacher interaction, and general behaviour. Murawski, (2009) however, argues that large classes can be successfully managed if classroom teachers lay out clear guidelines on classroom rules and procedures to the students.

There is ongoing discussion about class size and its effect on students' learning. Finn and Archilles (1990), Lopez (2007), and Graue, Hatch, Rao, and Oen (2007) point out that class size affects not only students' participation, it may also influence how often a teacher is able to interact with a large percentage of the students. On the other hand, some have argued that class size, no matter how big it is, has no effect on students' education (Huling, 1980; Lindsay, 1982). Many argue that managing a small class size is easier than managing a large one (Graue et al., 2007; Lindsay, 1982; Finn & Achilles, 1990; Finn et al., 2003) and therefore produce "higher achievement scores" (Bossert et al., 1982, p. 41). However, there has been little investigation into how and if school leaders are communicating with teachers on how to manage large classes.

Despite this, the issue of emerging human resource tactics was taken into consideration when schools were asked to implement this policy in Papua New Guinea (Tautea, 1997; DoE, 2004). As Vltchek (2013) affirms, the literacy rate is less than fifty-six percent. Lopez (2007) explains that through the use of classroom modification models, and as primary agents in regulating teaching strategies and planning methods, teachers are able to use their classroom organisational abilities to manage these large class sizes successfully. Finn et al. (2003) inferred from a research study of nine that there is a connection between class size and teachers' collaborative styles.

The level of interaction between the classroom teacher and the students is affected by the class size (Bray, 2007). Secondary schools that are funded by the government are overcrowded and this makes student-teacher interaction quite difficult. With FEP's overcrowded classrooms, teachers have to revisit their teaching practices. Graue et al. (2007) affirm that class size does not matter as long as teachers are developing learning strategies through interactive teaching styles. This can be difficult in PNG because of scarcity of resources and technology. It is for this reason that classroom teachers need assistance on how best they can manage large class sizes since secondary school teachers get to teach more than one class in a day.

### **3.4.2. Large Class Size Management**

#### ***3.4.2.1 Team Teaching***

Team teaching is defined as an approach used by two or more teachers working simultaneously with the same group of learners (Plank, 2011; Troen & Boles, 2012). This could be an effective method for teachers working with large classes. Unlike private schools in the country, Papua New Guinea secondary schools that are implementing the Free Education Policy do not have sufficient qualified nor specialised teachers. All the work is done by the one teacher. Students could be attended to more effectively if team teaching were used. Troen and Boles (2012) explain that team teachers can address issues of classroom management and get assistance from each other in helping students and sharing the workload. This

method could be effective during practical and science classes, especially when supervising and/or assessing students.

Having more than one teacher in a class facilitates classroom control and attending to students' needs is less demanding (Murawski, 2009). Walker, Scherry, and Gransberry (2001) add that team teaching does change the culture of the school because of the way students learn and how teachers work together to support learning. The positive relationship that is projected to the students encourages them to be more motivated to learn and to work closely with the teachers. Team teaching also promotes professional growth and satisfaction, job satisfaction, and sharing of teaching techniques and styles (Troen & Boles, 2012). Walker et al. (2001) found team members in collaborative teaching to be dedicated in working together to meet common goals. Large class size secondary schools in PNG that lack specialised teachers would find team teaching an advantage not only to manage their class sizes but also as a tool for learning.

However, team teaching will only work if teachers in the team collaborate effectively with each other (Montague & Warger, 2001; Murawski, 2009; Troen & Boles 2012). Team teaching can only be successful if teachers create a reciprocal relationship with each other in order to effectively manage large class sizes. The issue of communication plays a vital role in team teaching (Troen & Boles, 2012), whether teachers are working in pairs or in larger groups. Montague and Warger (2001) add that effective team teaching depends on sound communication skills. Through the enhancement of positive communication skills and the development of a rapport amongst members in the group, team teaching can become a useful tool for managing large class sizes. Therefore, teachers' meetings and mentoring sessions are pertinent in deploying effective class presentations and classroom management. Montague and Warger (2001) and Murawski (2009) confirm that team teaching is developed when school leaders support classroom teachers by setting aside time for them to carry out their discussions and teaching preparations.

### ***3.4.2.2 Collaborative Learning***

Renkl (2007) defines collaborative learning as “the process of two or more students working together to find a joint solution to a group task at hand” (as cited in Kaendler, Wiedman, Rummel, & Spada, 2014, p. 2; Montague & Warger, 2001; Hill & Hill, 1990). A collaborative learning approach could be used to assist teachers manage large classes. Teachers could use this pedagogical approach to encourage students to become actively involved in their learning. Through collaborative learning, students become “problem solvers and designers of their own learning” (Villa, Thousand, & Nevin, 2010, p. 8). Classroom teachers therefore need to know how to maintain an active collaborative learning environment that is conducive to active student participation through cooperative learning (Tabot, Tufan, & Hamada, 2013). Kaendler et al. (2014) emphasise that teachers need to be trained to provide and supervise collaborative learning in classrooms. Albeit training teachers may seem unnecessary communication between school leaders and teachers on how to monitor and support this learning approach is essential. Guided communication should become a mechanism to assist classroom teachers in using collaborative teaching approach to their advantage (Dehler, Bodemer, Buder, & Hesse, 2010). Tabot et al. (2013) point out that, there is a wide range of techniques for active collaborative learning available to teachers. These techniques could be explored and trialled with the help of school leaders.

Though Papua New Guinea is host to many different cultures, there are similarities in the way knowledge is imparted to young people (Guthrie, 2011). The use of collaborative learning would be appropriate for secondary schools in PNG since in the PNG cultural setting, children learn not only by observing adults but also through peer games and practices. Despite a western influence, group participation and/or presentation give confidence to Papua New Guinean youth (Lewis-Harris, 2012). Individuals identify themselves to their culture or tribe, which would be interpreted as a group. Collaborative learning may not only be an achievement motivation for PNG children but is also a social one. Through group discussion and problem solving students can develop a social bond with other students (Nelson, O’Mara, McInerney, & Dowson, 2006; Villa et al., 2010). Hill and Hill (1990) add that collaborative learning also promotes self-esteem,

inclusive learning and develops leadership skills in students. Cooperation and not competition is also valued through collaborative learning (Peck, 2011). These are social values that can be developed through collaborative learning. That is, apart from being able to use collaborative learning for class size management, positive relationship principles may also be fostered. Furthermore, students are freer working alongside their peers. Damon and Phelps (1989) assert that students feel more comfortable presenting their thoughts to other students other than to teachers (as cited in Villa et al., 2010).

Studies show that the success of collaborative learning relies on the quality of students' collaboration (Kaendler et al., 2014). Students need to get along well with each other in order for them to participate actively in shared learning. A lack of socio-cognitive relationships amongst groups could impede active and successful collaborative learning (Mullins, Deiglmayr, & Spada, 2013). Baker, Andriessen, and Jarvela (2013) add that a sound socio-cognitive relationship amongst students allows for effective participation in collaborative learning. Villa et al. (2010) affirm that students need to acquire social skills in order to achieve learning objectives through collaborative learning. To manage large class sizes, teachers therefore need students to be spontaneous and active in their learning. Hill and Hill (1990) argue that "collaborative learning skills are not inherited but learnt" (p. 9). Students need to know how to work successfully with others as a group. This means that classroom teachers would need to identify what those skills are and to teach them before applying collaborative learning as a teaching strategy for managing class size.

### **3.5 Teachers' Well-being and Community Support**

#### **3.5.1 Workload**

The notion of work overload is conceived as the amount of work that is loaded above the standard required by the Ministry of Education and which a teacher is expected to do (Goksoy & Akdag, 2014). Being overloaded and being underpaid are moral issues that affect the way in which teachers carry out their duties and responsibilities (Vulliamy, 2006). Classroom teachers in PNG secondary schools who have no teacher aide have to prepare lessons, mark work, prepare and mark

test papers, supervise out-of-class activities and at times step in for a teacher who is absent. The number of lesson preparations depends on the number of subjects and the number of classes the teacher is assigned. Additionally, teachers also carry out pastoral and administrative tasks. They provide students with guidance and counselling, see to teacher-parent correspondence, monitor students' attendance and school work and are heavily involved in data entry and assessment reporting (Leithwood et al., 2004; Goksoy & Akdag, 2014). Attending to these responsibilities is time consuming, challenging and is may be twice the work expected for teachers if the class size is large. Agigo (2007) points out that the rewards and remuneration that teachers receive are not commensurate to the load and long hours they put into work. School leaders therefore need to pay close attention when assigning work to teachers as Bubb and Earley (2004) add, "teachers need time to reflect on their work, plan lessons, develop skills and knowledge and interact with colleagues" (p.3). For these reasons, school leaders need to ensure that teachers' workloads are manageable to enable them to enact policy changes as well.

Apart from the mentioned responsibilities, a classroom teacher is also expected to maintain classroom control and transfer and evaluate information in the classroom (Easthope & Easthope, 2000). Furthermore, Goksoy and Akdag (2014) add that teachers plan, implement, and evaluate their teaching as well as the students' learning progress. Moreover, secondary school teachers in PNG are expected to both monitor the behaviour of the students and report any disciplinary matters to the school management team. Teachers are therefore responsible to monitor students' academic and behavioural performances. Research has revealed that disruptive conduct from students is related to poor academic presentation as a result of large class size, thus creating a bigger challenge for PNG secondary school teachers teaching in large class size schools (Finn et al. (2003). It is therefore vital that school leaders put in place professional development programmes to guide and mentor teachers so that they can manage these class sizes, especially when the amount of work they do is above the norm.

### **3.5.2 Initiatives for Teacher Well-being**

The implementation of FEP in the secondary schools has come with insufficient guidelines for teachers to apply this policy effectively (Guy, 2009). Even though teachers are expected to meet standards set by policy makers, they are given very little assistance (Alton-Lee, 2003) in managing large classes. Finn et al. (2003) argue that the morale and enjoyment levels of teachers are much higher when they are engaged in working with small classes. In addition, Graue et al. (2007) affirm that reduced class size allows for more classroom space and makes increased teacher-student interaction much more likely. However, when teachers are adequately assisted in dealing with large class sizes a positive teacher-student relationship is created, allowing students to feel that they are supported and motivated to learn (Yunus, Osman, & Ishak, 2011). It is therefore crucial that a degree of enjoyment in teachers must also be evident. Nevertheless, Bubb and Earley (2004) state that teachers suffer greater levels of stress compared to those in other professions due to the amount of work they do. It is therefore evident that the well-being of teachers is affected by their workload.

Apart from classroom teaching, assessment and reporting (UNESCO, 2011) are two key areas that classroom teachers are pressured to complete on time. Secondary school teachers need extra time outside school hours to complete these reports to meet deadlines. The additional hours allocated to school work can have an impact on how well teachers manage large classes.

### **3.5.3 Community Initiatives in Supporting Policy Development**

From a school's context, the community includes the school board, parents, guardians and any other person or group who has an interest in the welfare of the school (Jacobsen, Hodges, & Blank, 2011). From the perspective of government policy makers, schools are deemed to be organisations that deliver services to the communities through educating students, with the perception that advancement will flow from these policies to change how teachers and head teachers work and relate to their community (Hoyle & Wallace, 2005). Any learning institution influences and is also influenced by the larger community in which it exists. Hence, the relationship between the school and its surrounding community is



interdependent (Johnson & Kruse, 2009). In other words, a school cannot operate without the assistance of its community. Bray (2003) affirms that the “assistance of communities in schools can spread the weight of resourcing and at the same time enhance the volume, capacity and influence of education” (p. 41).

Since class size has increased in PNG schools many secondary school teachers may need the support and assistance of parents and other stakeholders. Avolos (1993) argues that parents need to be educated on the changes in policy, to help them understand the purpose of this change and be aware of the challenges teachers encounter in implementing the policy. The support given by the community could alleviate some of the responsibilities that teachers are faced with. Bray (2003) advises that there should be more community involvement in human as well as material resources in the school.

As a human resource, parents could assist teachers in managing large class sizes, especially on out of school programmes, when students take field trips or play sports outside the school grounds. Parental involvement in such activities helps strengthen the relationship that schools have with the community (Henson, 2012). Despite government directives for non-collection of project fees, parents in a secondary school in the Southern Highlands supported their children by voluntarily paying project fees to build additional classrooms for the school. One parent donated ten sets of desktop computers to the school (Alphonse, 2015). The Indian Government also presented a cheque to St Charles Lwanga High School for the construction of staff housing (Salmang, 2015). These are the kinds of community support that schools need to progress despite the negative effects of the Free Education Policy.

Community initiatives in sustaining this policy change are vital as they could encourage a positive teacher-student relationship that supports motivation and classroom teaching (Bray 2003). A teacher-parents conference is a meeting time where parents have the opportunity to check on their child's learning progress. Parents' attendance at teacher-parents conferences could help teachers understand their students better, especially students who need special attention or have special needs. It is challenging when parents or guardians do not turn up at school to discuss matters particularly relevant to their children. Bray (2007) states that due

to lack of funding, some countries have experienced the lack of support by school board thus leaving teachers bear the workload on their own.

Bucholz and Rosenthal (2005) affirm that communities will become part of schools only if they are interested in what and how schools are doing. Carroll and Carroll (2011) argue that schools should take responsibility in creating strategies to gain community support. In support of this idea, Jacobson et al. (2011) add that students will succeed if schools find a way to engage the community. In a newspaper article, Waketsi (2015) reports that a private organisation in National Capital District (NCD) is assisting school children by running coaching clinics over the holidays. The founder of the organisation states that the group is aware of the high teacher-student ratio caused by FEP and therefore would like to assist in arranging one-to-one sessions with students, especially in preparations for national examinations. Based on Suzuki's (2002) research, the possibility that teachers could leave students unattended is highly likely due to parents not paying any fees and the lack of community support (as cited in Bray, 2007). The community and especially parents need to be actively involved with schools to avoid such situations.

### **3.6 Facilities and Resources**

#### **3.6.1 The Availability of Facilities**

The convenience of facilities and infrastructure is a vital component in the accommodation of class size. The availability of classrooms and classroom space can be a problem, especially if schools do not have sufficient classroom spaces to accommodate large classes. Finn et al. (2003) explain that an overcrowded classroom has a negative impact on the student-teacher interaction level. Because of the large class sizes and the amount of time allocated to each lesson, students who are struggling academically often miss out on active class participation (Leithwood et al., 2004). According to the *Papua New Guinea National Institute Report* (2004) school facilities are either lacking or are in poor condition. Salmang (2015) reports upgrading facilities in schools remain a concern for school authorities and the department. Many secondary schools need the support of the national government because parents are apprehensive about the

overcrowded classrooms and the quality of education their children are receiving due to the changed policy. Mr Komba (“Education policy not working well”, 2015) argues that FEP was intentionally a political convenience. He emphasises that the core issues are not equally addressed in order for the policy to work. For that reason, schools (both primary and secondary) throughout the country have limited capacity to assist in the growing number of students’ enrolments with existing facilities which are in great need for maintenance.

The lack of specialised classrooms is also a challenge in accommodating large class sizes. In many secondary schools, there could be one computer and two science laboratories, or none at all (Kelegai & Middleton, 2002; Vulliamy, 2006; Kim & Anderson, 2012). Even then, there may be very few computers or limited science equipment for students’ use. It would be a challenge for teachers to get all students to carry out an experiment practically and come up with realistic results or for every student to actually learn how to use a computer. These limitations may continue to undermine the quality of teaching (Agigo, 2007) especially if classes are too large for teachers to manage. Therefore, due to limited access to and non-availability of resources, teachers need guidance; they need to be assisted on how best they can use limited facilities Kiptum (2012) suggests that teachers introduce the concept of “management circles” through group study or collaborative learning. A learning strategy that could increase the level of teacher-student interaction (Tabot et al., 2013) this could help teachers manage larger classes by monitoring smaller groups. However, grouping students into smaller groups could be impractical since many secondary schools have limited facilities and classroom space, which is the reason schools are forced into creating large classes. Even then, other schools have gone out of their way to allow what they feel is best for their students. Parents of students attending Kagua Secondary School in Southern Highlands have voluntarily paid K200 as project fees to assist in improving infrastructure at the school (Alphonse, 2015, 19 March). Despite government directives for schools not to charge project fees, parents in this school took the initiative to build classrooms using money they had put together.

### **3.6.2 The Accessibility of Resources**

Despite the Free Education Policy in Papua New Guinea, it is still a challenge to provide an education system that is accessible, relevant and of high quality (Kim & Anderson, 2012). Lopez (2007) argues that the teachers' capacity to assist students in their cognitive needs is confronted by the kind and amount of resource materials that are available in schools and not necessarily by the number of students. Secondary schools find that resources for teaching, textbooks for students, and books for the library and staffroom are all limited (NRI, 2004; Bray 2007). As a result, students tend to share textbooks, and teachers have to be a lot more innovative in their presentations. In addition, a school in the Western Province has not received its share of materials for the 2014 academic year, despite the fact that with FEP the government is supposed to send school materials each year to the schools ("Stationeries not sufficient", 2015). As a result classroom teachers may need to produce their own teaching materials or prepare charts to help in their teaching. Since there may not be enough text books because of these large class sizes, giving homework based on the students' resource books can be difficult, especially for teachers who do not have access to photocopiers or printers at their school. Tackling such problems is often left to individual teachers. However, the support that is given by school leaders would make a positive contribution towards meeting these challenges.

Small classes have sufficient resource materials and so the level of participation and student-teacher interaction is high (Huling, 1980). Lindsay (1982) adds that participation in co-curricular activities is much higher in smaller schools because of the ready availability of resources. Teaching science and other subjects that involve a practical component demands a lot of time and hard work (Arokoyu & Ugonwa, 2012). In large class size schools teachers may have to take longer than programmed to assess all students carrying out experiments or practical work due to the shortage of resource materials. In addition, teachers teaching large classes in science laboratories need to take extra precautions while experiments are being done.

On the other hand, Ogunsanya (1983) argues that it is not class size or lack of resources and facilities but the approach of the teachers towards the students that has an impact on the quality of the school. Alton-Lee (2003) verifies that it will be

a relief for teachers if they use pedagogical strategies to enable students to take charge of their own learning. There are advantages to this teaching approach. However, many PNG secondary schools are ill equipped (NRI, 2004) to allow students to take charge of their own learning. The availability of resources for both students and teachers would determine the implementation of this teaching strategy (Agigo, 2007; Bray 2007). A newspaper report by Setepano (2015) reveals that a contractor responsible for building infrastructures in NCD has avenged the government for negligence in implementing FEP. Setepano explains that according to the contractor the government failed to honour its commitment in settling payments for the building projects. Some schools are now left with incomplete buildings.

While access to education in PNG secondary schools has significantly increased, “considerable pressure on: infrastructure, teacher numbers, teacher training and material development and distribution remains the biggest challenge for the department” (DoE, 2005, p. 4). This is an ongoing challenge for the Education Department, and UNICEF (2013) reports that the government is trying to address these challenges through new policies and initiatives. The Prime Minister has stated that the government’s FEP is not only about moving more children into schools but also making certain that schools are appropriately resourced (“Government Committed to School Upgrades”, 2015). He adds that this includes building more classrooms and teachers’ houses as well as enhancing human resource (Issac, 2015). The national and provincial educational divisions work together to formulate and implement policies and programmes to achieve “education for all” (DoE, 2004, p.17; UNICEF, 2013). For this reason FEP is being implemented in the secondary schools.

### **3.7 Summary**

The core reason for implementing the Free Education Policy is to provide education “for all” for both primary and secondary school students. However, the primary impact of FEP has been a considerable increase in class size. The relevant literature suggests that a considerable increase in class size definitely affects

school policies and school practices, the role of school leadership, and the management of class size. Changes in the school policies and school practices are made in order to accommodate large class sizes. The role of school leadership as evidenced through the literature is challenged by the increase in class size. School leaders need to maintain well-established communication links with classroom teachers. The literature poses the need for human resource enhancement in developing FEP. To work in overcrowded classrooms, teachers need enhanced skills, including teaching and learning strategies effective for managing large classes permitting positive teacher-student interaction in such environments. The literature also suggests that classroom teachers need community support because of the amount of work they are now required to do.

## **Chapter Four**

### **Research Design and Methodology**

#### **4.1 Introduction**

Burns (2000) defines research as a “systematic investigation to find answers to a problem” (p. 3). Cohen, Manion, and Morrison (2011) explain that the search for an appropriate research tool is underpinned by the issue of what is applicable for the purpose of the particular study. Menter, Elliot, Hulme, Lewin, and Lowden (2011) reiterate that “fitness for purpose” should be the main consideration for the study taken (p. 41). The selection and application of methodological approaches and the paradigm to position the research within the study are dependent on the purpose and the method that suits the scope of the research topic (Cohen et al., 2007). It is important to note that “methods” are the specific procedures used to gather evidence while “methodology” describes the theory of knowledge that guides the research (Burton, Brundrett, & Jones, 2008; Zuber-Skerritt, 2011). Educational research can thus be defined as a “systematic enquiry in a learning environment carried out by someone working in that setting, the outcomes of which are shared with other practitioners” (Menter et al, 2011, p. 3).

The type of research I chose for this study is qualitative research, from the perspective of the interpretivist approach. I used interview methods to collect information based on the practices that the participants encounter in the implementation of FEP. The aim and focus of the study set the foundation to outline the theoretical framework.

This chapter is divided into five sections and covers the research design, including the methods and methodology of research used to investigate the focus issue of this study. The first section explains the theoretical framework of this investigation, shedding light on FEP and its impacts on school policies and class size management. The interpretive paradigm and qualitative research which underpin the research are also described in this first part. The second section illustrates and elaborates on the methods and process of gathering data, including some limitations. Validity and trustworthiness of the study are justified in the third section of this chapter. The third section also expands on the research

process used for this enquiry. Finally, the last section describes the pertinent ethical features, such as gaining informed consent and ensuring privacy of participants, and confidentiality deliberations undertaken to validate this investigation.

## **4.2 Theoretical Framework**

The National Education Department in Papua New Guinea introduced the implementation of the FEP in secondary schools in 2012. This was the first of its kind in secondary schools and therefore aroused mixed feelings amongst the general public. Parents who had children attending these system schools applauded the government for implementing this policy (Bray, 2007; Guy, 2009). It was a great relief for parents financially incapable of sending their children to school. However, the change in policy created challenges for teachers and especially school leaders.

Schools were directed to take in more students in order to fulfil the nation's "Millennium Goals", one of which was to provide "education for all" (DoE, 2004). To fulfil this goal the schools were directed to implement the Free Education Policy, since many parents were unable to send their children to school as they were either low income earners or unemployed. This directive created a significant increase in class size thus increasing the teacher-student ratio from one to eighteen to one to twenty-eight (based on the census form records (2010 – 2014) of the two schools in this study). The class sizes of secondary schools stand as forty-six to fifty plus students with one teacher. The teacher-student ratio refers to the total number of students in the school divided by the total number of students. The class size refers to the number of students in the class to one teacher. The size of the subsidy given by the government depends on the number of students per school. The subsidy does not take into consideration the availability and the amount of resources and facilities or the location of the institution (Hoyle & Wallace, 2005). Implementing FEP entails a clear flow of communication between school leaders and teachers on how to manage these large class sizes. Necessary changes to the school policies are crucial to successfully enacting this



policy. Clear decision making and identifying the levels of communication between school leaders and teachers are the focus points of this study.

Therefore, this study stands to identify whether FEP has affected the kind of decisions and changes that school leaders make with regard to school policies because of the increase in class sizes. The study also aims to find out if teachers are being assisted by school leaders in working out how to manage these large class sizes and in responding constructively to this change in policy. Consequently this study intends to develop a clear understanding of the leadership experiences based on the decisions leaders make. The research questions are designed (Menter et al., 2011) to focus on the impacts of this change in policy. The following research questions were used to ascertain if the Free Education Policy does affect the management of class size:

1. How has the change in policy impacted on the management of class size?
2. How has this change impacted on school policy, practices and decision making by school leaders?
3. Are classroom teachers assisted by school leaders on the management of class size?

A number of researchers have presented their discoveries on the impact of the implementation of the Free Education Policy in both developed and developing countries. Documented findings have highlighted the strengths and weaknesses. They include the transformation this policy has effected in the schools and countries that were studied. These researchers have set out to examine and analyse the benefits as well as the detriments of implementing FEP. I present here my study and findings of the impacts of the FEP in secondary schools in Papua New Guinea.

## **4.3 Research Paradigms**

### **4.3.1 Interpretivist Paradigm**

Research can be defined as the systematic investigation and study of a particular issue that seeks to find answers and establish outcomes. These outcomes could be

used to improve the field of study or may include important information that would be made accessible to others (Menter et al., 2012). Approaches to research are referred to as paradigms and the interpretivist paradigm is associated with qualitative research (Burton et al., 2008; Menter et al., 2011). Burton et al. (2008) define a paradigm as the frame of inquiry and Cohen et al. (2007) say that the interpretivist paradigm is the research approach that is “characterised by a concern for the individual and understanding the subjective world of human experiences” (p.21). It contextualises the understanding of how individuals interpret their surroundings (Cohen et al., 2000; Burton & Bartlett, 2005; Creswell, 2007). Unlike a positivist paradigm, the interpretivist paradigm relies heavily on naturalistic methods such as interviewing and observation (Burns, 2000; Denzin & Lincoln, 2005; Black, 2006). These methods ensure that an adequate dialogue between researcher(s) and participants is carried out to collaboratively construct a meaningful reality (Gall et al., 2007; Cohen et al., 2000; 2007; Burton et al., 2008). Creswell (2007) adds that the outcome of the investigation is formed through interactions with others. Burns (2000) and Black (2006) emphasise that the intensity and depth of interpretivism lies in its capacity to address the difficulty and significance of the issue.

With the interpretivist paradigm the researcher seeks to understand and interpret the participants’ perceptions and understandings of particular situations (Burton & Bartlett, 2005). Therefore the approach suited this research because it enabled me to explore and comprehend the views and opinions of the participants about changes in their context. At the same time, this process allows the researcher to promote a close interaction with participants through qualitative methods such as interviews and therefore appeared to be a suitable framework for this study. Another reason why I used the interpretivist paradigm is because I am very much interested in the shared experiences, interactions and views of the participants and this is what was collated. In principle, using an interpretivist paradigm as the basis of my study enabled me to access participants’ considered thoughts and views regarding the implementation of FEP. Cohen et al. (2000; 2007) highlight that everyday interactions with others rely on shared experiences. I also used the interpretivist paradigm because as a teacher I wanted to totally understand the participants’ views on this issue; for this reason I did not transcribe but interpreted

their shared responses. In addition, there are a number of other factors that support my ability to interpret the research data I collected. They include the fact that I am from Papua New Guinea and am currently studying in the field of educational leadership. I am a secondary school teacher and was part of a school leadership team prior to commencing my studies in New Zealand. I taught in the years before the implementation of the Free Education Policy and then into the first six months after the policy was introduced into the secondary schools. Therefore my use of the interpretivist paradigm is not solely because of my wanting to understand the participants share experiences but also because of my role as a school leader.

The danger is that this investigation model allows researchers to create their own meaning from collected data. This may not be viable especially when the meaning of the given information has been distorted. Additionally, in complex cultural settings, as it is in my case, the researcher may not be fully acquainted with the ethnic dimensions that might influence the way participants respond and the way their responses are interpreted (Burton & Bartlett, 2005). Being a Papua New Guinean, I am also familiar with the cultural constraints that are associated with educational leadership, especially for a woman in the role of leadership. Nevertheless, as a researcher, my familiarity with the study's cultural setting should not allow me to develop misconceptions based on participations' responses.

#### **4.4 Qualitative Research**

Qualitative research is defined as an established activity that negotiates a set of interpretivist material practices (Denzin & Lincoln, 2005). Wallen and Fraenkel (2001) add that "research studies that investigate the quality of relationships, activities and situations or materials are referred to as qualitative research" (p. 432). Gall, Gall, and Borg (2007) affirm that qualitative research is positioned within an interpretive paradigm since it includes approaches such as ethnography, grounded study, case study and phenomenology. To develop understanding of particular phenomena researchers use these approaches to generate informative accounts of the participants' lived experiences (Litchman, 2006; Burton & Bartlett, 2005). Qualitative research is concerned with understanding individuals'

insight, beliefs and opinions about the world around them (Burns, 2000; Cohen et al., 2011; Menter et al., 2011). Denzin and Lincoln (2005), Black (2006) and Cohen et al. (2011) explain that it is through qualitative research that one could use an interpretive, naturalistic approach to studying the world. Morrison (2002) adds that interpretive researchers recognise that they are part of rather than separate from the research topics they investigate. This means that to understand better how people relate to each other in their natural environment, field work is carried out as well as inductive reasoning (Merriam, 1998; Lichtman, 2006).

Educational research is defined as an organised study or a form of enquiry to find answers to a problem in the field of education (Burns, 2000; Gall et al., 2007; Menter et al., 2011). Wallen and Fraenkel (2001) and Burton et al. (2008) explain that the purpose of educational research is to provide information relating to identified challenges and to recognise how the study can be used to educate and enhance school practices. Burton et al. (2008) add that through qualitative study researchers are able to analyse participants' words and actions. Burns (2000) reiterates that in qualitative research not only are the actions and words of the participants captured, the researcher is also able to vividly understand events from the participants' point of view. Therefore, in this study, subjective data were collected since the emphasis of qualitative research is on words rather than numbers. This enables the researcher to represent the circumstances as experienced by the participants through their accounts.

Qualitative research was adopted for this study because this approach gives voice to participants (Cohen et al., 2011) and therefore would likely have an effect on their presentation. Qualitative research was also chosen because it displays features that were applicable to my investigation. The design draws on the practices of the participants in their natural environment and how they relate to other people and make sense of communal veracity (Merriam, 1998; Wallen & Fraenkel, 2001; Denzin & Lincoln, 2005; Lichtman, 2006; Bell, 2010). At the same time, qualitative research takes a holistic approach to interpreting data that involves humans (Burns, 2000; Wallen & Fraenkel, 2001; Lichtman, 2006; Kervin, Vialle, Herrington & Okely, 2006). Robert (1997) points out that this field of research establishes an opportunity for readers to make analytical reflections on the study carried out.

Qualitative research seeks to discover knowledge through researcher and participants' interaction during the research process. This is crucial in building a relationship between the two parties that is based on trust and respect. On the other hand, one of the challenges in qualitative research, especially in interviews, is the potential artificiality of the responses given by participants (Wallen & Fraenkel, 2001). As researchers, interviewers need to lead informants away from artificial responses by using probe questions to examine their responses.

## **4.5 The Sample**

This section presents the research process for this study. I briefly explain my selection of the site and participants in the research.

### **4.5.1 The Context**

This study was conducted in two urban secondary schools in Port Moresby, the National Capital District (NCD) of Papua New Guinea. The two schools are labelled "School A" and "School B". One of the schools is a boarding school; the other is a day school. One of the schools is fully staffed while the other has two teachers less and both schools have students enrolled from grades nine to twelve and are secondary schools that implement FEP. It was my intention to engage a school that had very large class sizes while the other had slightly fewer students. Both schools had to have class sizes of more than forty-eight students. These schools were also selected because I am familiar with them and their administrative teams. Despite the fact that they are within ten to twenty minutes' drive from the Department of Education, both the district and head offices, teachers in these two schools were considered for this study because they would be well-versed with the impacts and challenges of implementing the change in policy. All interviews were conducted within the institution. In one school the interviews were carried out in the school library and in the other the sessions were done in the school's conference room. Both the semi-structured and the focus group interviews took more than an hour.

### **4.5.2 Participants**

The participants in this study are all members of the school leadership team in their respective schools. Individual semi-structured interviews and a focus group interview were carried out in each school. The two schools in the study have more females than males in the leadership roles. One school has one hundred percent women who participated in the study while the second school has fifty percent females and fifty percent males. In total, three participants took part in the semi-structured interviews and seven were engaged in the focus group interviews. All participants had had from seven to thirty-five years of teaching experience and sixty percent of them had been in a leadership role for more than five years. More than half the participants had been in leadership before and during the change in policy. Engaging these teachers provided not only a wide range of experience but more specifically a distinct depiction of the variations this change of policy brings.

To preserve confidentiality (Wallen & Fraenkel, 2001) codes were used for both semi-structured and focus group participants. I have designated participants in the semi-structured interviews as SL1, SL2, and SL3. The participants in the focus group interviews are coded as T1, T2, T3, T4, T5, T6 and T7. To further protect the identity of the participants the schools have not been separated. This means that no certain code represents a certain school. The dates for participation for the semi-structured respondents were 18<sup>th</sup>, 24<sup>th</sup> and 27<sup>th</sup> of March, 2015 and the focus group interviews were carried out on the 21<sup>st</sup> and 30<sup>th</sup> of March, 2015.

## **4.6 Data Collection Methods**

### **4.6.1 Interviews as Research Methods**

An important part of presenting research that holds validity, trustworthiness and authenticity is the collecting of data. There are a number of ways in which data can be collected for the purpose of research. One of these methods is interviewing. Interviewing is perhaps the most widely used method of data collection in education research (Mason, 2002; Cohen et al., 2011). A research interview is defined as a verbal conversation aimed at drawing out information based on a certain topic of interest with the intention of collecting, compiling and reporting data (Wallen & Fraenkel, 2001; Menter et al., 2011).

Cohen et al. (2011) elaborate that this technique of research allows the researcher and especially the informants to “discuss their interpretations of the world in which they live, and to express how they regard situations from their point of view” (p. 409). Its flexibility (Gall et al., 2007; Cohen et al., 2007; 2011) enables researchers to use probe questions to elicit further information from the participants.

Interviewing as a type of qualitative data collection tool can disclose the personal opinions of the participants (Lodico, Spaulsing & Voegtle, 2010; Wallen & Fraenkel, 200). According to Myers and Newman (2007) and Mason (2002), the qualitative interview is one of the most useful data gathering implements in qualitative research as it produces an exhaustive study and understanding of the participants’ experiences and views. Cohen et al. (2007) emphasise that the interview is a flexible tool for data collecting and allows participants to give short or complex responses, be verbal or nonverbal, or even give incomplete responses. It is therefore important that while researchers maintain control they yet allow for flexibility throughout the session. Fontana and Frey (2005) add that interviews are not simply neutral tools used for gathering data but rather active interactions between two or more individuals leading to traversed circumstantial that establishes outcomes.

Myers and Newman (2007) and Fontana and Frey (2000) point out that there are three types of qualitative interviews, structured, semi-structured and group interviews. A structured interview is where the content and the procedures are organised in advance (Cohen et al., 2007). Briefly defined, the semi-structured interview is made up of open questions with a focus relevant to the purpose of the research. The basic features of a group interview are that: more than one person is interviewed at the same time; it saves time; and is appropriate to use when interviewees feel at ease responding as a group (Creswell, 2007). The two techniques used in my study are semi-structured and group interviews. To gather the information from the participants, I used a paper based interview guide but the dialogue was recorded using a voice recorder (Cohen & Crabtree, 2006, Menter et al., 2011).

#### ***4.6.1.1 Semi- structured Interviews***

One of the methods most appropriate to this study is the semi-structured interview. This is a more flexible style of interview as it can be used to gather analogous data (Burton et al., 2008) through the conversation. Burton and Barlett (2005) add that a semi-structured interview is carried out when the researcher is particularly interested in the participant's own account. Participants are able to share their experiences, their thoughts and their views through semi-structured interviews. Bishop (1997) and Menter et al. (2011) elaborate that through the use of open-ended questions semi-structured interviews promote free interaction and opportunities for dialogue and clarification between the researcher and the participants. Even though script questions are prepared beforehand, probe or lead-on questions can also be used during the interview (Krueger & Casey, 2000; Burton et al., 2008; Myers & Newman, 2007).

According to Kervin et al. (2006), more personal data collection is made possible through the use of semi-structured interviews. The advantage of this tool is that it produces a substantial volume of rich qualitative data which the researcher hopes will result in highlighting the issue being discussed (Burton et al., 2008; Menter et al., 2011, p. 129). This method of interviewing can provide a greater breadth of data than other methods, given its qualitative nature (Fontana & Frey, 2000). Bates, Droste, Cuba and Swingle (2008) add that qualitative interviews are suitable to use when the aim of the researcher is to "ascertain the meanings of actions and experiences and the sentiments underlying expressed opinions" (p. 4). The need to sustain dialogue throughout the session is crucial. Good use of interview questions will maintain interaction and lead to the generation of knowledge (Whiting, 2008).

#### ***4.6.1.2 Focus Group Interviews***

A focus group interview can be defined as the interaction through dialogue amongst a group of individuals of the same level (Marczak & Sewell, 1998; Rabiee, 2004; Menter et al., 2011) who have been brought together to present their thoughts, at the same time, producing elaborated descriptions through their shared responses (Fontana & Frey, 2000; Cohen et al., 2007; Gall et al., 2007;



Bell, 2010). The group interview is a tool that researchers can use to extract phenomenological information in natural settings (Krueger & Casey, 2000 p. 185; Menter et al., 2011) and is valued especially if the researcher needs comprehensive information from the participants (Bell, 2010). The outcome of focus group interviews is conceptualised from the issue or issues that are being discussed (Mason, 2002).

The advantage of doing a focus group interview is the ability it provides to collect data in a short period of time (Lederman, 1990; Marczak & Sewell, 1998; Krueger and Casey, 2000) since there are two or more participants being interviewed at the same time (Myers & Newman, 2007; Menter et al., 2011). Another advantage of focus group interviews is that the interaction among participants will likely yield the best information when the interviewees are cooperative while responding (Creswell, 2007). Gall et al. (2007) and Burns (2000) explain that though the researcher initiates the discussion by asking questions, the participants dominate through sharing their views. Participants are able to pick up from each other the threads of discussion and build them on through their own responses. Group interviews can be used to successfully aid participants' recall of specific events, or to encourage enhanced description of events (Fontana & Frey, 2000).

As with the semi-structured interview, the focus group interview questions are prepared beforehand but other questions that may develop from the conversation can be used during the interview (Myers & Newman, 2007). Probe or lead-on questions can be used to stimulate deeper discussions. Menter et al. (2011, p. 149) explain that focus group interview participants are allowed to articulate their own thoughts and this can provide insights on their comprehension of the issue and the level of their feelings associated with the topic. The interviewer must be flexible, empathetic, unbiased, persuasive, encouraging and a good listener (Fontana & Frey, 2000). The responses and guidance of the interviewer may also influence the way the participants respond. A challenging factor with focus groups is that the researcher must be able to skilfully facilitate and manage the group (Cohen et al., 2007). Some participants may try to dominate the conversation if the researcher does not regulate the discussion. All participants need to feel that they are equally part of the dialogue and that their views are equally important.

## 4.7 Data Collection Process

The design chosen for this study in qualitative research was the use of interviews (Burton & Bartlett, 2005; Menter et al., 2011). In qualitative research it is assumed that the participants will answer the questions in good faith (Burton & Bartlett, 2005); therefore it is important to inform them that their responses could make a difference (Menter et al., 2011) and could create changes in the area being studied. My reason for using interviews as a method of research specifically semi-structured and focus groups interviews was their relevance to my context. Because I am familiar with the context of this study, I felt that by using these methods, I would be able to gather data that could be analysed easily with minimal setbacks. However, I needed to take care that my familiarity with the field of research did not interfere with the outcome of the study (Burton & Bartlett, 2005). Since I was familiar with the context of the two schools, I had to maintain a neutral viewpoint on the participants' responses. Fontana and Frey (2000) explain that in an interview, the interviewer "must maintain a 'balanced rapport' and not interject his or her opinion of a respondent's answer" (p. 650).

Generally the people of Papua New Guinea express themselves freely when they talk, thus conveying their views and experiences effectively through dialogue. Body language and voice tone also help researchers understand the deeper thoughts, opinions and feelings of the participants. My interest was to find out from these executive teams what their views were on the change in policy and its effects, and the challenges the teams face in supporting classroom teachers as they responded to this change. In PNG secondary schools the school executive is the team that ensures implementation of government policies. Therefore, through the interviews, the questions used elicited their thoughts and experiences (Wallen & Fraenkel, 2001; Menter et al., 2011) about this change. At the same time I was able to reiterate points or questions they did not understand. This gave me the opportunity to inquire as we moved through the discussion. Thus, this method makes comprehensive data collection possible since it is adaptable (Kervin et al., 2006; Bell, 2010). Whiting (2008) and Burns (2000) explain that the method allows for other questions to emerge from the dialogue.

#### **4.7.1. Semi-structured Interview**

The semi-structured interview gave me the opportunity to explore how secondary school leadership is challenged by the implementation of FEP. The participants in this study were members of the school executive team and they each participated in one semi-structured interview. I was fortunate to be able to include two participants from one school though they participated as individuals in two separate sessions. In conducting my semi-structured interview with the participants, I began by clarifying the purpose of my interview. A set of pre-designed questions and further conversational questions were used to elicit information from the participants (Burns, 2000; Guion, Diehl & McDonald, 2011; Menter et al., 2011).

I used the three types of linking questions - main questions, probes and follow-up questions - to get detailed and specified responses from the interviewees (Burns, 2000; Rubin & Rubin, 2012). This enabled me to collect detailed data. Through this method, the questions asked helped to gather participants' thoughts and experiences (Menter et al., 2011) about managing these large class sizes in a way that was practical. Additional time was allowed for the participants to express their views on the change and the challenges they were encountering in implementing the policy. The interviewees were cooperative and generally showed confidence in their understanding of the kind of questions presented to them. They were also explicit in their explanations. In listening to the participants in the semi-structured interview, I could sense from the tone of voice that these school leaders have a task that is challenging and immense. In addition, the participants were able to disclose information relating to how this change in policy has affected not only "their world" but also "their style" of carrying out their duties and responsibilities.

#### **4.7.2 Focus Group Interview**

The focus group interview is considered to be a useful tool for extracting information from participants whose native language is not English. The focus group interview is appropriate for gathering data since questions that could be difficult for one person can be expanded and clarified through the ideas presented

by other participants as “[i]t is from the interaction of the group that data emerge” (Cohen et al., 2000, p. 288). The researcher is able to gain rich information through this process.

The teachers were asked questions relating to the challenges of managing large class sizes in their classroom teaching and how they dealt with these challenges. The number of participants per group was between four and five. Even though there was a good number to share their experiences, it was still controllable when it came to collating data. Using a focus group interview also helped in the flow of responses; the participants drew from the experiences of others and bounced ideas off one another (Marczak & Sewell, 1998; Fontana & Frey, 2000; Rabiee, 2004). I found this very helpful and encouraging when I carried out this study.

Consequently, I was able to get more qualitative data from this method since I wanted to gather “in-depth information on the subject of how the participants think about an issue” (Bell, 2010, p. 166). Apart from dialogue, Papua New Guineans express their experiences well through the use of body language. This includes their tone of voice, their eye contact and their posture (Black, 2006). In addition, using interviews meant that the respondents did not feel restricted in their responses. Furthermore, I believe that using this method helped me to understand clearly how respondents are affected by the situation or change in policy (Mears, 2009). This was very clear in their responses. In the focus group interviews I was able to develop a connection with the participants and thus to gather information that disclosed their deep feelings relating to the implementation of the Free Education Policy and class size management. I was made aware that “the onus is on the researcher to establish and maintain a rapport with participants” (Cohen et al., 2011, p. 422).

#### **4.7.3 Limitations of Interviews**

Using interviews in a research study has its benefits. Its limitations, on the other hand, may also be encountered. Firstly, in semi-structured interviews, detailed information can be drawn from through questioning. Probe questions are asked to support a viewpoint or direct the flow of dialogue (Kvale, 2006). However, if probing misleads participants or is misinterpreted by researchers, it can result in

inadequate or inaccurate responses which then weaken the validity of the interview data (Burns, 2000; Cohen et al., 2007). Burton and Bartlett (2005) state it is possible that the interviewer may greatly influence the responses by either manipulating the discussion or by leading the interviewee. This could be the case if the participant is discreet or inarticulate. Furthermore, as Kervin et al. (2006) point out, the respondent may give responses that are limited or inaccurate. If this happens then the variables may be too wide, thus rendering the research study invalid. Lodico et al. (2010) assert that the summarising and examining of data in interviews is time consuming and complicated. This is because the uniqueness and structure of each interview makes collating the data more difficult (Burton & Bartlett, 2005). It is crucial that the researcher ensures that respondents' views do not show researcher bias or become distorted by some form of researcher control over the interviewee (Kvale, 2006). Bell (2010) further notes that the biggest problem of carrying out a research interview is it takes a long time hence limiting the number of respondents who are able to participate.

Secondly, the tendency for a group to be dominated by one or two participants is common in focus group interviews. This means that the results from these discussions cannot be generalised (Menter et al., 2011). Creswell (2007) adds that researchers need to monitor individuals who are dominating, and encourage all respondents in a focus group interview to participate.

In this particular study, other problems were encountered in both the semi-structured and the focus group interviews. On one occasion, maintenance work outside the building used for the interview conference disrupted the recording of one of the sessions in a semi-structured interview when the officer was called out to attend to an emergency. I had to restart the interview fifteen minutes later. On other occasions, particular individuals used language and terms that were inappropriate for use in the study. They were perhaps showing their frustration in regard to the challenges they were dealing with. Finally, certain participants took a while to respond to the questions and I was therefore apprehensive about the responses they eventually gave. I used probe questions to allow them to reiterate their opinion and found that there were slight changes to their original responses.

## **4.8 Research Process**

### **4.8.1 Gaining Access from the University of Waikato**

I submitted my research proposal together with the ethics application to the University of Waikato Research Ethics Committee and received approval to do my research (see **Appendix A**) in Papua New Guinea. The role of the Ethics Committee is to approve research proposals and ethics applications and to ensure that “no badly designed or harmful research is permitted” (Bell, 2010, p. 47).

### **4.8.2 Gaining Access to Conduct Research in Papua New Guinea**

Seeking approval to access the site of research is an ethical requirement (Menter et al., 2011). I therefore wrote letters to the Provincial Education Advisor in the National Capital District (NCD) (**Appendix B**) seeking approval to carry out my study in secondary schools in the city. A copy of the letter was sent to the Standards Officer of NCD since he is responsible for performance monitoring and human resource enhancement of teachers in schools. I also wrote letters to principals of secondary schools in NCD (**Appendix C**) a month prior to the study. I was given approval to carry out my research in two secondary schools in the capital, Port Moresby.

### **4.8.3 Procedure for Selection and for Meeting Possible Participants**

The selected participants are those who are likely to “provide the necessary range-relevant insights on the focus of this study’s objectives” (Menter et al., 2011, pp. 135-136). In this study the selected participants were secondary school teachers in Papua New Guinea who had taken on leadership roles in their schools. Together these people are known as the school executive team. This team includes the principal, who is the formal school leader, the deputy principals and the heads of subject departments.

I received confirmation from the schools via text message and visited the two secondary schools in NCD a week before the study. I met with each principal and went through the process of the study with them. Both principals gave their approval for me to meet with possible participants. I met first with participants of

the semi-structured interview, then with possible participants of the focus group. I provided each with the information sheet (**Appendix D**) and went through it with them. This enabled me to respond to queries they had regarding the study. The actual research study began on March 9<sup>th</sup> 2015 and ended on April 8<sup>th</sup> 2015.

#### **4.8.4 Validity and Trustworthiness in Qualitative Research**

Validity is a significant concept in research and is a requirement in qualitative research (Cohen et al., 2000; 2007). Burton and Bartlett (2005) define validity as “the ‘truthfulness’, ‘correctness’ or accuracy of research data” (p. 27). Cohen et al. (2011) and Burns (2000) add that validity is a vital component in research, and refers to the scope in which an instrument provides us with the data we are able to collect (Wallen & Fraenkel, 2001), with the assurance that the information is trustworthy. In research, collected data need to be correct, accurate and verifiable. Punch (as cited in Burton & Bartlett, 2005, p. 27) points out that another approach in ensuring validity in interpretativist paradigm, is placing emphasis on how the researcher is able to defend the interpretation of the collated data. Cohen et al. (2011) explain that obtaining one hundred percent validity in research may not be possible. Qualitative research involves a degree of standard error that is inherent and therefore must be acknowledged. They contend that in qualitative research validity can be addressed through the “honesty, depth, richness and scope of the data achieved” (p. 179). These features of validity encapsulate the concept of legitimacy by examining the criteria and techniques of validity. They cannot function on their own as they complement each other to demonstrate the trustworthiness of the study (Burns, 2000; Burton et al., 2008).

While validity refers to the stability, accuracy and dependability of the data, trustworthiness or reliability describes the degree to which a research instrument or method is repeated in the collected data (Burns, 2000; Burton & Bartlett, 2005; Wallen & Fraenkel, 2001). Validity is also “synonymous to dependability” (Cohen et al., 2011, p. 199). Again, collected data must be reliable and able to be trusted as accurate. Burns (2000) says that the validity and reliability of the research will depend on the methods used to collect the data, the kind of questions asked and how the data have been collected, analysed and collated. He points out

that if these instruments are reliable then researchers can depend on them. Mason (2002) affirms that reliability therefore involves the accuracy and techniques of the research method.

Like other research methods, interviews must also meet the standards of validity and reliability (Gall et al., 2007). I had to apply a certain criterion to justify the credibility of this study. This included certifying that knowledge claims were dependable, accurate and substantiated within the gathered information (Cohen et al., 2011). I therefore took time after each interview session to go over the recorded interview and interpreted notes with participants so as to corroborate their responses. Since it was my first time carrying out a research investigation of this scale, I had to be careful that the “voice” of school leaders in PNG secondary schools was impartially represented. Thus, as a researcher my role as the instrument in collecting and interpreting the data was crucial (Lichtmann, 2006; Kervin et al., 2006). The collated data need to be factual, as presented by the participants. I have to ensure that collected data are valid, reliable, trustworthy and genuine. Furthermore, since it is qualitative research, the study draws on the interpretivist paradigmatic perception (Menter, et al., 2011). This is because information that was gathered as data had actually been constructed by the participants (Cohen et al., 2007).

Finally, the design of qualitative research was chosen because the study involved investigating the role of school leaders and their level of communication with teachers regarding the changes in school policies and the class size management. This was done through administered interviews with school leaders. Consequently, in qualitative study, these principles play a vital role so as to ensure a high level of validity in the collation of data.

## **4.9 Ethical Procedures**

### **4.9.1 Ethical Considerations**

In any research study, “researchers need to consider carefully, before, during and after the conduct of the study the ethical concerns that can affect their research participants” (Burton & Bartlett, 2005, p. 69). Ethics is a core component of any research study (Burton et al., 2008). Menter et al. (2011) define ethics as “the



branch in philosophy that deals with distinguishing the right from the wrong and the good from the bad” (p. 47). Most people characterise “ethics” to mean moral values or rules that differentiate right from wrong (Resnik, 2011). Menter et al. (2011) point out that ethics is directly related to values and to defining moral behaviour. As defined by Blaxter, Huges and Tight (cited in Bell, 2010, p. 47), in the context of research ethics is about being comprehensive about the nature of the arrangement a researcher has entered into with the participants or subjects of the study.

As stated by Burns (2000) and Wallen and Fraenkel (2001), ethical ideologies or procedures distinguish what is socially conventional from what is socially unacceptable. For example, careful consideration needs to be maintained at all times to ensure that no harm, physical or emotional, be caused to any participant in the study. In addition, it is also important that ethical measures are taken to maintain the privacy of the informants (Menter et al., 2011). Participants in education research must be respected and extreme care must be taken to ensure that no participant is harmed (Wallen & Fraenkel, 2001; Burton et al., 2008).

Educational research seeks to change policies at certain levels or to find solutions to issues encountered within a context (Burton & Bartlett, 2005). Research is a systematic enquiry, of which the outcomes are made accessible to others (Menter et al., 2012). For research studies to be carried out and the outcomes made available, a contract of consent must be made between the researcher and the subject(s) of the study. Brooks, Riel and Maguire (2014) point out that in education research, ethics is concerned not only with how the researcher relates to the participants but is also concerned with the quality of the study that is being carried out. For this reason, researchers would then have to ensure that all ethical issues and other proceedings are sought to verify the quality of the study taken (Wallen & Fraenkel, 2001). In addition, ethical procedures in education research are about “being clear to the participants regarding the nature of the study and the features of the agreement they have entered into as informants in the study” (Bell, 2010, pp. 46-47; Wallen & Fraenkel, 2001).

When using people or even animals as instruments in accomplishing results or be termed as those in research, it is important that ethical standards are taken into consideration and used as a device. Resnik (2011) points out:

why it is significant to adhere to ethical norms in research is that: it promotes the purposes of research; it endorses values that are crucial to collaborative work; it helps to ensure that researchers can be held accountable to the civic; in order to gain public backing for further research; and many of the norms of research defend a variety of other important moral and social values (p. 2).

For this reason, it is a must that “ethical considerations are addressed before researchers can embark on a study project” (Burton & Bartlett, 2005, p. 29). Brooks et al. (2014) affirm that “gaining access to potential participants is a challenge since it is laced with ethical concerns” (p. 157). Thus, in this study the participants were informed about the purpose of the study and their role in the investigation, and at the same time the procedures, objectives, assurance of confidentiality, potential benefits and likely risks of the study were clearly explained to them.

#### **4.9.2 Access to Participants and Informed Consent**

Informed consent through provided information is the primary component of the investigation process in determining if participants are to be part of the research (Davis, Panacek & Thomson, 1996; Bell, 2010). Burns (2000) and Cohen et al. (2007) add that informed consent is the central ethical principle of any research study. Consent from the participants should be sought before the study begins (Burton & Bartlett, 2005) and that agreement must be based exclusively on full and defined information. Brooks et al. (2014) emphasise that respect for the participants has to be maintained throughout the study. Consent protects and respects the rights of participants, thus placing some of the responsibility on them should anything go wrong in the study (Cohen et al., 2007). All ethical concerns that relate to gaining informed consent from the participants must be thoroughly covered. As a researcher, I also had to consider the application of some aspects of the tribal or *talanoa* paradigm (Robinson & Robinson, 2005) when interviewing

the male participants because of their status and by way of cultural respect as a female researcher.

Informed consent for voluntary participation including the right to withdrawal at any stage of the study was also made clear to the participants (Burton et al., 2008). Menter et al. (2011) point out that ethically participants in a research study have the right to informed consent freedom from coercion. Being able to win the confidence of potential participants may not be easy even if consent has been given by those in authority. The consent form was given to participants who actually turned up for the interview. I went through the form (**Appendix E**) with the participants and made clear (Wallen & Fraenkel, 2001) to them what their rights were in the study. The participants filled in the consent forms after they were clearly cautioned about the value of confidentiality of those who participated in the study and what was discussed. In all interviews all participants remained until the end of the session even though I reiterated that they had the right to leave at any time if they wished to.

#### **4.9.3 The Right to Privacy through Confidentiality and Anonymity**

In research, the term “confidentiality” is defined as not disclosing data that could identify participants, and is therefore regarded as an ethical concern (Cohen et al., 2007). Confidentiality, that is, not publicly identifying research participants, is one of the key ethical tools for protecting the rights of those participants (Cohen et al., 2007; Brooks et al., 2014). It includes a well-defined understanding between researcher and participants about what will be done with the collected data (Burns, 2000). In addition, since qualitative research often includes data that is personal or highly sensitive, I needed to ensure that confidentiality is handled professionally and in good faith (Lodico et al., 2010) through the establishment of formal consent at the start of the study.

Burton and Bartlett (2005) and Cohen et al. (2007) explain that the researcher should assure participants that confidentiality of collected data and their rights to privacy are guaranteed. Trust between the researcher and participants depends on the extent to which anonymity is guaranteed (Menter et al., 2011; Burton & Bartlett, 2005). In research studies, “the essence of anonymity is that information

provided by the participants should in no way reveal their identity” (Cohen et al., 2007, p. 64). Privacy and confidentiality are two ethical principles intended to safeguard the privacy rights of the participants. Bell (2010) asserts ethics in research involves an agreement with the participants regarding the use of information, how it is to be analysed and how it will be reported and disseminated. Thus for me as the researcher, it was important to certify that every effort was made to prevent the public deducing the identities of the participants in my research (Cohen et al., 2011).

Since the participants were in leadership positions, it was vital that confidentiality and anonymity were treated with respect. My role, therefore, as a researcher in this study was important. I wanted to establish a rapport of respect and confidence with the participants so as to gain a deeper understanding of their real life experiences. For this reason, all steps were taken to ensure that the data obtained in this study were kept confidential to the participants, the supervisor and the researcher only. In addition, both schools were not named and to ensure confidentiality and anonymity for participants, codes were used to protect their identity (Cohen et al., 2007). Prior to the interview, the participants were assured that the information they gave would be used only for the purpose of research and would therefore remain confidential. Any unsolicited adversarial and negative comments presented by participants have therefore been treated as confidential.

#### **4.9.4 Research Quality**

Researchers need to remain focused on their findings, to ensure that quality in research is maintained throughout the investigational process regardless of the model used (Cohen et al., 2007). The quality of the research can be achieved if the data are valid, reliable and trustworthy, and all ethical concerns have been taken account of (Burton & Bartlett, 2005). Eisenhart (2006) adds that the representation of collected data must be presented in a way that is valid, reliable and clear for the reader to appreciate the experiences of the researcher in the field of research. In measuring validity of the data the researcher needs to ensure that the dependent variables are consistent with the independent variables (Black,

1999). Cohen et al. (2011) explain that the correlation between the statistical data and its representation in the final report does put weight on its validity.

Bell (2010) explains that research contracts, codes of practice and the purpose of the study are some of the ethical guidelines that are presented and discussed in detail with the participant prior to the research. It would have been a breach of ethics if the participants did not know what the actual contract of this research was. Furthermore, those who would have had access to these findings may not accept the validity of this research since the specifications of the subject guidelines were not supplied.

On the other hand, Burton et al. (2008) note it may not be difficult to gain complete reliability if the participant population is small. They point out that “validity value is largely determined by the extent to which the findings are related to the issue and how well the participants responded to the questions” (p. 168). Menter et al. (2011), state that researchers need to establish trust and transparency with participants in order to gain valid and reliable data. This could create a positive effect on the quality of the investigation, both in the gathering of information and the collated data. Interview procedures were clarified to the participants at the start of the sessions

The interviewees in my study were also informed that a voice recorder would be used to collect data (Menter et al., 2011) and document the responses of the participants so that no biased assumptions were concluded from the interviews (Bell, 2010). The recording would then be interpreted and translated. Not having to take notes allowed me to be attentive to the responses and participate naturally in the conversation (Burns, 2000). Most importantly, to justify validity, I hoped to collate detailed data through the use of the research methods I had chosen. In action research, interviews as a type of qualitative data collection tool can disclose the personal opinions of the participants (Lodico et al., 2010). As Gall et al. (2007) observe a voice recorder will capture and preserve an accurate account of information collected in the discussion (Gall et al., 2007). They explain that because audio recording provides a complete verbal record, it can be studied more thoroughly than written data.

## 4.10 Data Analysis

Once the data from the interview have been collected, they are analysed (Cohen et al., 2011) often by codifying and recording. According to Burton and Bartlett (2005) there are various ways in which this can be done. The two main data analysis strategies are, firstly, the inductive approach strategy, used when analysing unstructured interviews, and secondly a combination of the inductive and deductive approach, used to analyse structured and semi-structured interviews (Burton et al., 2008; Mason, 2002). Menter et al. (2011) explain that the inductive approach allows for the emerging of ideas and themes from the data of the interview and goes through four phases. These phases are: observation, pattern, hypothesis and theory. In the process of analysis, the researcher is able to identify concepts to find commonalities, differences or pattern analysis in the collated data (Caracelli & Greene, 1993) to help produce a comprehensive report based on the findings.

I adopted a qualitative research approach and an interpretive paradigm to collect qualitative data. Data analysis in qualitative research and more specifically in recorded interviews means taking apart the collected data by selecting and filtering out units which can be used in the reporting (Wellington, 2015). Qualitative data analysis is often inductive and looks-for patterns evolving from the given information.

My previous research work has taught me that it is possible to achieve authentic collated data through careful and clear data analysis. Analysis of these data comprises different stages. It involves organising, accounting and explaining the data (Cohen et al., 2007) using the interpretive approach. Creswell (2007) elaborates that interpretation in qualitative research involves preparing and organising the collected data; condensing by collating the data into themes through the use of coding; and representing the data. Brooks et al. (2014) caution that, ethical measures need to be considered when analysing data. They summarise from the Australian Association Report of Research (AARR) statement that it is pertinent to maintain honesty and accuracy in data analysis and data reporting. With recorded interviews, the ease with which data can be

analysed is reliant on how effectively they have been recorded (Burton & Bartlett, 2005).

The way in which the data are brought to bear on the initial research questions constitutes the success of the study (Burton et al., 2008). Qualitative data analysis of this study relies on interpretation. In my process of interpretation, I made changes to sentence structure to allow for readers' comprehension of this report

#### **4.10.1 Coding**

Strauss (1990) defines coding as “a way of fracturing data in the service of their interpretation” (p. 53; Cohen et al., 2011). Coding is the translation or interpretive process and involves analysing and categorising collected data. Menter et al. (2011) explain that by coding or labelling parts of the interpreted notes a researcher is able to draw themes which are related to the research question.

Rossler (2008) adds that in qualitative research, coding provides a structure for a systematic analysis of collated data and is a first step in creating a theory. By using open and analytical coding (Cohen et al., 2011) I interpreted the content of my recorded interviews and categorised them into themes. I used the analytical coding because the themes derived from the gathered data (Cohen et al., 2011).

#### **4.10.2 Interpretation and Themes**

A number of themes surfaced from the interpretation of the collected data. I used key concepts in the content of collected data to create the themes Menter et al. (2011) explain that once the recorded data have been coded, they are sorted into themes. The actual report, and themes representing the collected data in the study, will be provided through the interpretation of the data.

I started on data analysis as soon as I returned from data collection. However, I initially started developing my analytical ideas from the study (Menter et al., 2011) immediately after I completed data collection from both schools. I found that I was able to interact with the recorded data while I was interpreting it. Once I started organising the data I set about collating themes from the interpreted data.

#### **4.11 Summary**

This chapter has elaborated on the qualitative approach and interpretive paradigm used in this study. The process of gaining ethical approval from those in authority, the schools and the Education Department, and receiving the informed consent of the participants have also been discussed in this chapter. In addition, chapter four has provided a comprehensive account of the methods and procedures used for information collection and data analysis.

Human participants must be well informed about the ethical conducts of the research, their rights to consent or not, their privacy and confidentiality and their protection from possible harm. This in turn creates a relationship built on trust and at the same time allows the presentation of findings that are authentic. Thus, any research study using humans as subjects must cover all ethical guidelines to justify authenticity of the findings. An effective and genuine research study will depend largely on the instruments and methods of collecting data (Cohen et al., 2007, p. 144) and, most importantly, the application of ethical guidelines.

As defined by Menter et al. (2011), a research interview is a dialogue that could be between two people or between an interviewer and a group of people. An interview is intended for obtaining certain information relating to a certain issue or topics that are of interest to a study enquiry. Cohen et al. (2000) explain further that in an interview the researcher orally asks questions that should specifically be related to the research and listens attentively to the responses given by the interviewee or interviewees. Menter et al. (2011) also point out that interviewing is a research method that intends to assist researchers to understand why people think and behave in a certain way, or it may highlight why something is the way it is (p. 126). Therefore, interviews can help a researcher analyse what there is to be done about a situation and also reveal ways to improve the issue that is researched.

The methods used in this study to collect data were the semi-structured interview and the focus group interview. A total of ten respondents participated in the study, three in the semi-structured interview and seven in the focus group interview. School leaders in two secondary schools in the capital city of Papua New Guinea participated in the research.



According to Cohen et al. (2011), informed consent requires researchers to disclose full details of the research to potential participants. The principle of informed consent dictates that participants have the right to know about the nature of the research that is being proposed and the likely consequences of their participation. They need to either agree or disagree with taking part in the study. Burns (2001) advises that the procedures developed to ensure confidentiality of for those involved in a research study necessitate delicate handling because the information is usually put out for others to access. As Bell (2010) and Menter et al. (2011) explain, studies involving humans as subjects must be reviewed and approved by an institutional board before they are carried out. The board's approval depends on the ethical considerations taken by the researcher.

Finally, this study has tried to achieve authenticity and trustworthiness through the processes of qualitative research, which include credibility, transferability, reliability and validity. In the process of collecting data in research, it is critical to examine the extent of the validity and trustworthiness of the data collected (Bell, 2010). Validity means ensuring that a research project actually measures what it says it will measure and that when its data are collated and analysed the report accurately represents participants' realities.

The process of ensuring that validity and trustworthiness are evident in the study implies that an ethical approach has been taken to ensure that the moral standards and values of the participants have been carefully taken into account and will be protected. Wallen and Fraenkel add that even though the act of conducting research is value driven, the validity claims of the researcher must meet certain standards to avoid preconception (2001).

## **Chapter Five**

### **Findings**

#### **5.1 Introduction**

This chapter presents the findings that emerged from the interpretive analysis of qualitative data generated through the use of the semi-structured and focus group interviews. The data were gathered from participants in two urban secondary schools in Papua New Guinea. These two schools are located in the National Capital District, in Port Moresby, which is the capital city of PNG. Of the ten participants, six were from one school and four were from the other; seven took part in the focus group interviews while the other three were engaged in the semi-structured interviews. The interviews produced rich data that indicated how the roles of school leaders in secondary schools are affected by the implementation of the Free Education Policy. What I found interesting when analysing the collected data is that the participants did not respond directly to the given questions. Many of them talked about the influences or the impacts that contributed to their responses.

The data signify that the policy has influenced the kinds of decisions that school leaders make in modifying school policies and practices in order to accommodate this directive from the national government. The findings were also able to portray how classroom teachers are being assisted by school leaders in managing large class sizes. As presented in chapter one, the key impact of FEP in PNG secondary schools is the increase in class size. The school leaders' perceptions of FEP and its impacts on the management of class size were guided by these three key questions:

1. How has the change in policy impacted on the management of class size?
2. How has this change impacted on school policy, practices and decision making by school leaders?
3. Are classroom teachers assisted by school leaders on the management of class size?

The gathered data reflect the views and practices that have been shaped by the decisions made in order to accommodate the large class sizes this change in policy has produced. The data also reveal how these teachers perceive and review their role as members of the school leadership team. The participants' responses affirm that their responsibility as school leaders is to some extent shaped by this directive, ensuring that the progress of their school is maintained. The interaction between the participants and the researcher established a shared understanding of the expectations and the amount of work they do in implementing the changed policy. The collected data were analysed and themes that appeared to be significant to the study were identified. The themes are divided into three key areas: the Free Education Policy; roles of leadership; and managing class size.

## **5.2 Free Education Policy**

The focus of the study is the national government's directive on implementing the Free Education Policy (FEP) in Papua New Guinea secondary schools. These secondary schools are either solely or partly funded by the government. Since the implementation of FEP, class size has risen (Marshall, 2002) to over forty-eight students. Some secondary schools have more than sixty students in a class. The national government's funding of FEP is referred to as school subsidies. Regardless of schools' locations, the subsidy does not take into account availability of resources, facilities or teachers, but is estimated according to the number of students in each school (Guy, 2009).

### **5.2.1 Changes in Policies and Practices**

#### ***5.2.1.1 Changes to School Policies***

The participants in both the semi-structured and focus group interviews verified that there have been changes to certain school policies. These have resulted from the implementation of FEP and specifically an increase in class size. As SL1 explained:

*We needed to make slight changes to school policies to accommodate these large class sizes. We now have an average of forty-eight students in grades nine and ten and forty is the average number in grades eleven and twelve. Certain school policies and practices are influenced by the number of students in the class or the number of students taking a certain subject. For example, changes were made to carefully monitor students' movements during class time. We have had students who were present for one test and absent for another, on the same day. Students are taking advantage due to the large class sizes and because they do not have the same teacher for the whole day.*

SL2 also had concerns:

*We are apprehensive about the class size since we are expected to prepare grades ten and twelve students well to sit the School Certificate examination at the end of the year. The department and especially parents will be raising questions if generally the students' examination results are poor. For this reason school policy changes are made to assessment and other relevant policies that are affected by class size. Our subject evaluations from HODs reveal that one of the reasons assessment deadlines are not met is because teachers have too many assessable pieces and that takes longer to mark. Therefore, for practical subjects, the assessment weighting is now sixty percent theory and forty percent practical. Subject departments are giving more theory compared to practical assessment, even in practical subjects.*

Similarly, SL3 pointed out that change in school policies are aligned to practical assessment. The participant explained that, despite using the Outcome Based Curriculum (OBE), teachers are unable to progressively assess students as stated in the curriculum due to the large number of students and being given limited time. For these reasons, the participants in the semi-structured interviews said, policy changes are made to assessment and other school policies that are immediately affected by the number of students in each class. They noted that the increase in class size has challenged the requirements of varying the assessment types given to students. As T1 asserted:

*As a department, we had to decide on assessment types and especially the kind of assessable pieces that would make marking quick and easy since most teachers in my department teach more than two classes in at least three different subjects. It may take longer to set multiple choice questions, but it becomes easy when marking over forty-five pieces, multiplied by two or three, depending on the number of classes teachers take.*

T2 shared this view, stating that:

*Because we need to cover all content topics before the end of the year, we do a lot more group assessment pieces because it is easier to mark when you have a large class size. We need to ensure that our marking criteria are precise to facilitate active involvement and participation by each group member so that students understand that they may not all receive the same mark even if they are in the same group.*

In addition, T3 affirmed that the lack of sufficient resource materials, especially students' text books, has forced them to stop teachers keeping class sets in the classroom. The lack of resource materials is identified here as a hindrance to effective large class management. T4 agreed that as for a practical subject teacher, the assessable pieces have become more theory and less practical oriented. This is not only because such pieces are easier to mark but also because it saves time when marking projects from a larger number of students. T5 added that they had to include sports programmes that would allow for more student participation during physical education (PE) lessons even though they lacked sufficient sporting equipment. According to T6, a change in her department policy includes teachers having to give homework worksheets once a week as a way of checking if students are keeping up with the content covered. In this way, she said, teachers in her department were able to check if students were learning.

In addition, classroom teachers are expected to effectively manage these large class sizes even though the classrooms are overcrowded. In discussing this point, T7 explained:

*We have additional clauses to departmental policies to allow for more student teacher interaction. For example, our average class size is fifty and our classrooms are overcrowded. Having to check students' work as well as homework need better organisational and classroom control skills. We have to apply firmer departmental rules to help in managing these large class sizes. The main thing is that we need to be consistent. Often it is difficult when you have more than five lessons to teach in one day to stick to these rules.*

It appears then that changes to assessment types and procedures are the main focus of modification of school policies to accommodate the increase in class size. Teachers also justify the need to be able to cover all subject topics before students sit the School Certificate examination at the end of grade ten and grade twelve.

The school leaders are the first people to come under the spotlight when students, especially in grade twelve, do not win a place at a tertiary institution. In addition, it would take longer than was formerly the case if teachers were to mark students' individual pieces since most teachers have more than three different classes to teach. For this reason more theory and group practical assessment are administered to allow effective management of class size, in relation to assessment.

#### **5.2.1.2 Changes to School Practices**

The implementation of the FEP in secondary schools has also affected certain school practices that were deemed to be either too flexible or as simply impracticable for large classes. To explore what changes are being made to school practices, the participants in the semi-structured interview were asked to describe how school practices have been influenced by FEP. The schools have seen changes to school practices in order to accommodate the increase in student numbers. SL 1 expressed her concern that:

*As an all girls' school, the safety and security of these students come first, therefore we made necessary changes to school practices that are related to their safety. For example, we need to transport a larger number of students home after school each day but we do not have the buses to transport them, all at the same time. Because we have to start moving students off campus earlier than usual, it does have an impact on how much they are able to learn within the time frame they are in school. Furthermore, eighty percent of our day students need to make bus connections to get home.*

The number of students in school is identified here as a concern, especially when they travel to and from school daily. Changes in school practices in this case have affected the amount of class time these students have. Talking about other changes to school practices, SL2 said:

*Change made to school practices also includes organising more school activities so students do not get into trouble because they are not participating. For example, instead of having all students play sports on one day, two afternoons are taken for sports. Because of insufficient sporting equipment and work tools, two sports' houses play sports while the other two do work parade. We try to organise out of class activities in*

*a way that allows for more students' participation. Even then, we still have a shortage of sporting equipment and working tools as there are so many students and the subsidy given by the government is not enough to cover resources and utilities that the school needs.*

SL3 added:

*The main change that we have made in school practices is that we added sanction clauses onto disciplinary guidelines. For example, students' truancy and bringing mobile phones to school have become difficult to monitor. We are trying to maintain student discipline but still have problems with these issues. Because of the increase, we have many students who are struggling academically; they are disruptive; lack concentration and often do not complete work on time. These are students who skip classes because they cannot cope and as a result, with large class sizes, students take advantage when they are in a large group.*

This study indicates that FEP does influence school practices that are directly affected by class size. However, participants in the focus group interview were not asked this question because school practices are initially administered by the principals and deputy principals.

### **5.2.2 Implementation of FEP in Secondary Education**

Implementing the FEP in secondary schools has brought both advantages and disadvantages to the growth of the school. School leaders are tasked not only to enact the policy but also to ensure that they create an environment that nurtures progress and develops its implementation. In implementing FEP in secondary schools, SL1 protested:

*Implementing FEP is problematic. One of the biggest issues that we are dealing with in implementing this changed policy is that teachers are overloaded. They have to prepare for classroom presentations and at the same time do other school duties. Implementing this policy is a challenge when we are still short of teachers and have now been instructed by the NCD Provincial Education Board to take on another grade nine class of fifty students, seven weeks into term one. As a school, we have no choice since this is a directive from the department. This additional class is almost a full term behind. I do not even know if teachers are willing to help these students catch up with the other grade nine classes. There is content from seven different subjects that they need to cover before the*

*start of term two. On top of that, how do we assess fifty students who have missed two to three assessment pieces for a number of different subjects?*

SL2 agreed, and argued that:

*I feel the government moved too fast without proper feasibility studies before implementing this policy. Our classrooms are too small and overcrowded; we lack resources and teaching materials and government funding is less than what we need. Schools are talking about closing due to lack of funding. We are a city school and we have to pay for utilities, as well as resource materials to keep the school in operation and that is not covered by FEP.*

SL3 observed:

*The policy is good as it gives a chance to students who cannot afford to be educated to get an education. However, many teachers are unable to meet deadlines because of the number of students and the amount of work they do. The classes are large, the school level is still the same and there are no additional teaching positions. If school levels are increased thus creating more teaching positions, we may be able to create smaller classes and having more teachers should help us implement FEP with minimal setbacks. On the other hand, I also feel that if the school's level increases more positions are created, the government will push us to increase our students' enrolment. This is the unfair game of politics.*

The participants were inclined to implement FEP with sufficient resources of both materials and teachers. Shortages of these resources are issues that challenge an effective implementation of FEP in secondary schools. As T1 expanded:

*In implementing FEP, we need to identify maintainable teaching methods within the means of our department to cater for large class size. This is because we are already taking time out of class to assist and tutor students. But we cannot do that continuously. A forty minute lesson is insufficient to teach fifty students and assist their individual needs. One main concern is that we need to cover all the required topics before the year ends. Teachers in my department are encouraged to help the students as much as they can, but to keep moving in ensuring that the content is covered on time.*

T2 and T4 asserted that there is more work to do now with the implementation of FEP than there was before. They are encouraged to do more teaching demonstrations and informal in-services for team teaching. Teachers are urged to share teaching and learning strategies within the department in order to help each



other identify and use styles that are applicable for large class size classroom use. For these reasons, T3 emphasised that:

*Teachers within my department are urged to be realistic in what they are able to do within the time they are given. Our main concern is to actively engage, as much as possible, all students in learning. However, that is not possible. Though most teachers are willing, the classrooms are too small, overcrowded, and make effective teacher-student interaction difficult. As a school leader, I need to keep my approach in check, that I do not expect too much from the teachers or force them to do more than what they already have to do.*

Discussing under-resourcing, T5 argued:

*The lack of resources and teaching materials makes teaching more of a burden than something to enjoy. The number of students in class and the amount of work we have to do are putting a strain on our ability to develop well-prepared lessons. Therefore the quality of our presentations may not always be a hundred percent well-prepared lessons. To constantly check if teachers are doing what they are supposed to be doing is not right but sometimes it is the best thing to do to make certain that there is progress and that students are actually being taught.*

Under these circumstances, T6 affirmed that:

*In addressing this policy our department is doing the best we can but we are challenged by the number of students and that is not easy. Due to the shortage of materials, teachers are preparing charts and worksheets. However, it would be a bonus if the government installs smart or multi-boards in our classrooms. This will certainly cut down on the amount of work we have to do.*

On the whole, and sharing the same perception, T7 asserted that:

*The classes must be taught, no matter how big they are. You cannot leave a class unsupervised in case something unexpected happens. Within our department we try to work as a team, in putting together what we can for our students. However our problem is we do not all live on campus, so often the only time we can squeeze in an urgent informal discussion session would be straight after school. It is hard to effectively assist students when teachers have to use public transport to get to and from school because they live off campus.*

Overall, the interviews revealed that the task of implementing the FEP is a challenge in the face of inadequate facilities and resources to accommodate large

class sizes. The need for schools to be fully staffed is crucial when class sizes are large. With the shortage of teachers or if a teacher is absent, a large number of students will either be without a teacher or will not be fully attended to, even if they have a teacher to cover the class. In addition, living on campus or near the school grounds has advantages over living off campus for busy teachers.

### **5.3 Leadership Roles**

School leaders in secondary schools are very much challenged in working together as a team to ensure that the implementation of the FEP merges into the schools' progress and organisation regardless of class size. The participants in the semi-structured interviews specified that the role of communicating with classroom teachers on how to manage class size is generally left to the HODs. This is because HODs are responsible for organising teaching programmes, subject assessment and resource material matters for the departments they are in charge of. The HODs are also stipulated in ensuring that the syllabi and curriculum are taught to the students.

#### **5.3.1 Addressing the Change in Policy**

Addressing the change in policy is not only difficult; it is a mammoth task for school leaders. The main concerns that were raised in the discussions included: identifying approaches to managing large classes; maintaining consistency in attending to teachers and students' needs; being innovative despite class and classroom size; and keeping a clear flow of communication between school leaders and teachers. In identifying the effects of addressing this changed policy, SL1 said:

*Most teachers in this school teach three to four different classes, for two or three different subjects. We would like to address this change in policy with ease but that is not the case with large classes. Often I argue with the teachers but we move on. With the large class sizes, teachers have to double or triple the same kind of work that they were doing prior to the change in policy. Even though there are specialised subjects to be taught, there are not enough rooms or teachers to teach these subjects. Besides*

*that, we have students who would like to take on certain subjects but we cannot allow them for the obvious reasons that we do not have the teachers or the classrooms to take in more students. I believe that as teachers we are passionate about our work, hence we work on despite the challenges we are faced with.*

SL3 and T2 maintained that:

*Even though we have more students and additional classes but with very limited resources, we are expected to be resourceful and creative in implementing the policy. The government was fully aware that by establishing free education, enrolment figures will increase, thus creating large class sizes. Yet they failed to ensure that schools were well prepared to take on the increase.*

The participants in this study were mindful that the effectiveness of implementing FEP depended on their role as school leaders. Addressing this change in policy is a challenge, especially with the amount of work that comes with it, because with a larger number of students, there is more work to be done. T1 added:

*It is a big challenge for teachers who have as many as four different preparations for classroom presentations. As a school leader I am aware that in the city the survival of a child depends on education and being able to earn a living. I therefore encourage teachers to look at FEP from that perspective, even though the classrooms are overcrowded. The teachers do work hard but they are encouraged to do what they can with the limited resources.*

In sharing the same viewpoint T2 cautioned that:

*Being part of the science department I am always concerned about supervising students in the laboratory, especially when they are doing experiments that involve the use of burners or chemicals. It is a worry when you have an overcrowded room with one door and fifty plus grade nine students. Though teachers are receptive, we are concerned about such dangers because we know that we could get the blame if something bad happens. The government may have overlooked the fact that this could be a danger to large class sizes.*

T3 and T4 also pointed out:

*We have resource issues in addressing the change in policy. In addressing teacher shortage, some teachers have to take more apart from doing other school duties and responsibilities. It is hard to say that all teachers are*

*tolerant of this changed policy, especially when you have National Examinations to prepare students for.*

*This is even more depressing when we cannot get additional resource books from the curriculum even though we are just fifteen minutes' drive to the department's materials office. We cannot even get cheaper ones from the book shops. With the limited resources we are mentoring other teachers within the department to assist in teaching specialised subjects. However, having to prepare lessons then mentor others becomes burdensome for the one teacher. Due to the amount of class time some teachers are making alterations and or inclusions to their subject content so as to accommodate large class sizes.*

T5 and T7 shared the same notion:

*The government did very little in identifying the problems that could come about when implementing this directive. They should not expect teachers to receive this policy with open arms since the increase in class size puts a strain on teachers because of the workload. In fact schools should have participated in some tangible study by way of highlighting the kind of facilities, resource materials and teacher numbers that would help the government understand what schools needed before allowing more students into the classrooms.*

It is, therefore, unsurprising that for the reasons presented by the participants not all teachers are receptive to this changed policy. The lack of resources, inadequate facilities and shortage of teachers are challenges that school leaders face in assisting classroom teachers.

In sharing their views, school leaders that despite limited resources and the increase in class size, they are doing what they can in assisting classroom teachers to respond constructively to this changed policy since it is a directive from the national government.

SL1 said:

*As school leaders, we are expected to have answers to issues that the school is faced with. It is not easy and it hasn't been easy. The HODs are encouraged to be consistent in assisting teachers by doing lesson observations and lesson demonstrations. We also urge them to be organised and attentive to the needs of their teachers and be consistent in their role of leadership especially by following through with teachers' responsibilities within their departments. Again we cannot push them as*

*they are classroom teachers themselves; in fact we are all classroom teachers. I often deal directly with HODs if something is generally not right with the department. However, if the problem is continuous and involves the same person, then I follow up on the teacher concerned.*

Additionally, SL2 and SL3 confirmed:

*Being in the role of leadership has its setbacks, but as school leaders we have to ensure that we make the right decisions for the school and most importantly for the students. To make certain that students are taught we closely monitor that no class is left unattended and that teachers are attending to their duties. We can encourage them but they need to have that willingness and open-mindedness to take it on because of the students, even though the class size is large.*

These participants were aware that as school leaders they needed to constantly communicate to each other the issues that affect the organisation and management of large class sizes. In their role as school leaders, HODs are tasked with attending to the classroom needs of teachers in their departments. Concurrently, participants in the focus group interview elaborated on their views regarding the response of classroom teachers. T1 and T5 began by explaining that being in a leadership role is challenging since there are other responsibilities other besides teaching and being in charge of a department. They argued that they needed more time to discuss and follow up on teachers within their subject areas. T2 added:

*Being a HOD is challenging, you cannot afford to be away from school. There is always so much to do. In my department I encourage teachers to be assertive classroom presenters. Communication between me and the classroom teachers is a vital component to class size management. Maintaining a good working relationship with others is a strenuous role as school leaders. We have teachers who have been teaching for more than twenty years and we can learn a lot from them. But sometimes it is not easy to persuade them to be receptive to this change. The role of leadership is truly demanding.*

T3 reported that communication through discussions or sharing of teaching experiences are ways in which she was able to identify how teachers are coping with the changed policy. However, she was unable to do it continuously since she had other responsibilities. She pointed out that in a secondary school classroom teaching is not the only duty that teachers do. This view was shared by T4, who

explained that it was not the attitude of the teachers but the amount of work that they had to do that was stressful.

T6 said:

*Helping teachers develop better ways to organise classroom presentations is a challenge. Many teachers are receptive because they have the students' education at heart. But at times I have to follow up on grade coordinators for consistency. It is not easy to encourage male teachers to actively be responsive, especially if you are a female and in the role of leadership. They will eventually do the task but sometimes not without an argument.*

Hence, as T7 explained:

*Our role as HODs is challenged when teachers are: behind schedule; are absent; or are not managing classes effectively. The class's behaviour and reputation becomes questionable because of these shortfalls. When assessment results are low we are called in to explain why this is so, even if we are not teaching the class. Getting teachers to be receptive is a difficult task when they are pressured to successfully manage large class sizes in overcrowded classrooms and do all the paper work that comes with the number of students.*

### **5.3.2 Decision Making**

The participants in the study demonstrated in their responses that it is vital for school leaders to make decisions that will assist teachers to effectively manage large class size through active teacher student interactions. These decisions are crucial for the school to move forward. They explained that they are tasked to make decisions that are beneficial to students learning. In responding to the kind of decisions that school leaders make in effective management of large class sizes, SL1 and SL2 affirmed:

*With large class sizes it is often impossible to maintain effective teacher-student interactions. However, one way of doing this is by creating study groups within the class. As school leaders we see the importance of maintaining open communication channels with classroom teachers so as to identify teaching and learning approaches for effective teacher-student interactions. It is tough with so many students and only one teacher in the class. We have to even give "fresher" courses to grades nine and ten teachers so that they are able to help teach grades eleven and twelve.*

Sharing the same notion, SL3 explained that the number of low ability students has increased significantly and therefore assisting them individually is a lot more challenging. There is an essential need to have more experienced teachers to help out. SL3 further pointed out that the welfare of teachers has not been taken into consideration with the introduction of FEP.

The decisions that school leaders make have to be communicated to classroom teachers strategically and with consideration. School leaders are therefore challenged to ensure that they deliberate on how made decisions will affect the school, the teachers, and most importantly the students.

With this perception, T1 explained:

*Students' field trips are only approved if two or three teachers are accompanying the students. Because of the class size we need more than two teachers. However, adding a few more teachers would mean classes are without a teacher for the day or even for a couple of hours. We cannot allow field trips for large class sizes if less than three teachers are accompanying the students. Tough decisions have to be made here and this is where parents could assist us.*

T2 added that a critical decision made in her school was to have a change in the timetable to allow for block teaching. This allows for certain grades to be divided into smaller groups depending on the number of teachers available for that subject. However, this teaching approach is applicable only for subjects that have enough teachers. Similarly, T4 and T7 justified that:

*Creating a good working relationship with all teachers within the department is a vital component of decision making. As team leaders, we need to consider how much teachers are already doing because they are not teaching just my subject; they have other subjects to teach as well.*

T5 raised the concern that if decisions are to be made then the welfare of teachers should also be addressed. Similarly, T6 argued that:

*Even though ongoing mentoring, meetings and or in-services amongst grade teachers are evident in my department, teachers do not seem to have sufficient time to plan well-prepared lessons for their classes. Most of these discussions are informally carried out when teachers have non-contact periods. Many teachers are here on weekends either marking students' work or preparing for the following week. The time factor becomes an additional issue where large class sizes are concerned.*

School leaders in this study were resilient in making decisions that would benefit the school, the teachers and most importantly the students. At the same time, they saw the need to be supported to successfully disseminate skills and knowledge in order to make decisive decisions to move their institution forward.

#### **5.4 Managing Class Size**

Since the implementation of the FEP, making decisions about managing these large class sizes has been a demanding task. Team teaching and student group study are teaching and learning strategies that these two schools are using to help manage their large classes. SL1 and T3 asserted:

*We are expected to effectively teach large class sizes with limited means. There are a lot of informal discussions since we have less specialised teachers compared to the number of classes. We encourage team teaching and group study to assist in class size management as there are students who are able to lead learning. HODs are challenged to assist teachers within their departments to be assertive in developing strategies to manage large class sizes.*

Supporting the same view, SL2, SL3 and T4 added:

*We encourage subject departments to develop manageable learning and teaching approaches to manage large class size, but is not easy, yet we are expected to produce good results in the national examinations. This is what we are challenged to do – produce results with the little we have. We are expected to help students pass the physics examination, for example, but we are unable to give students proper practical lessons due to the lack of updated information and equipment. At the same time, smaller study groups are easier to manage. Nevertheless, we are still faced with overcrowded classrooms, lack of teaching and learning resource books and still have one teacher to take the class.*

For this reason, T1 reiterated that the amount of teaching time becomes an impediment due to the large class size. Even though teachers are encouraged to develop manageable learning and teaching approaches to manage large class sizes, they are unable to find the time to do this effectively. T2 related:



*Due to overcrowded rooms and limited resources, managing these large class sizes is difficult. Sharing and using learning and teaching strategies are approaches that we are discussing at the moment. We are hoping that we can be able to use approaches that are not only applicable to our class sizes but also that they are manageable considering the amount of time we have.*

In the same way, T5 explained that they are constantly challenged in managing large classes with limited resources. According to T6, more years of teaching have taught the few experienced teachers to use simple techniques to manage and organise large class size, this is helpful. Sharing the same view, T7 added that they were doing what they used to do before the change in policy but there was now almost three times more. T7 suggested that one way teachers could help identify low ability or weaker students was to help each other because it was not easy to identify weaker students on one's own.

Many participants expressed disappointment that teachers were unable to interact satisfactorily with students and for this reason, writing students' reports becomes a tedious job when trying to find the right kind of words to characterise them. It was also pointed out that team teaching would help in managing class size; however, teachers are already overloaded and to use this teaching strategy would create more work for them.

#### **5.4.1 Workload**

Teachers' workload can be divided into two parts: classroom preparation and presentation, and extra-curricular activities. Participants in this study explained that there was more work to be done in both classroom preparation and presentations and extra-curricular because of the increased number of students. To deal with the amount of work that comes with the number of students the participants suggested that team work, open discussion channels and developing a positive working relationship may ease the burden of workload.

Developing this idea, SL2 and SL3 argued that:

*The amount of work that we do today is two or three times more than before FEP implementation. There is the teaching, and then there are other official duties like doing boarding duties, supervising work and*

*sports, set and mark tests and assignments, be a class patron - writing reports and meeting parents, and meeting deadlines. We are expected to prepare well planned lessons and do paper work that goes with that responsibility. Our workload has certainly increased extensively and as there is so much to do with very little time.*

School leaders are required to assist students pass the examinations, in the midst of the other work that they have to do. With the limited resources and the large amount of work that needs to be done, T1 confirmed that having to teach a subject on her own did put a lot of stress on her ability to successfully prepare and teach her students. T2 clarified:

*Finding ways to assist teachers effectively teach large classes is challenging. We cannot get to assist all students. Members in my team including myself still do not know the names of students and it is now week seven of term one. Even more, it is difficult to attend to students' individual needs in the classroom because we have to concentrate on the whole group. However, whenever possible, we try to assist them during recess or lunch time, only if we have the time.*

Participants in the focus group said that having to ask teachers to be creative with the limited resources is often difficult as more time is needed to prepare well. They thought that some of their workload could be reduced through community or especially parental support.

T4 noted “We all do some of our work after official hours or on weekends as I do not have enough time during school hours to complete my work.” Similarly, T5 expressed disappointment in stating that “The education department is fortunate that we are concerned for our students and so overwork ourselves.” T6 and T7 pointed out that the amount in remuneration that teachers receive did not acknowledge the amount of work they did.

#### **5.4.2 Human Resource Enhancement**

Findings in this study further reveal that since there are more students and fewer teachers, organising and developing teachers' understanding and knowledge in managing large class sizes is paramount. While SL1 pointed out that professional development of classroom teachers is a concern that certainly needs to be addressed, SL2 maintained that there is still the problem of identifying appropriate

tools with which to manage large class sizes. For example, SL2's school has adopted an English in-service programme that aims to help all teachers use the language confidently. This would be beneficial when teachers are either preparing or presenting lessons because being able to use the language confidently would save time in writing students' reports. SL3 and T3 said:

*There is a need to be skilled in order to manage large class sizes competently. We have more students and fewer teachers. Often teachers are doing what they can do, in organising themselves and taking on the work load and team teaching of large class sizes. However, the question is, what kind of skills do we need to enhance large class size management and how do we use these skills? We also have two disabled students but teachers here are not specifically trained to teach these students. We help them in ways we think are right, that is all we can do. Certainly training is required in managing large class sizes.*

The study further reveals that experienced teachers try to assist by mentoring or offering professional development to less experienced teachers. However, the mentors are also overloaded and therefore have very little or no help others. T2 asserted that:

*It is not easy to create a working environment that is conducive and amicable to team work as individuals are different and would rather do things in their own way.*

For all these reasons the participants contended that it was a challenge to educate students with little or no assistance from the Education Department. Assisting teachers to manage these large class sizes is vital if teachers are expected to enable students to pass examinations and at the same time carry out their other required duties competently. T6 and T7 emphasised that the Education Department, through the Standards officers, is responsible to ensure that teachers are able to manage large class sizes despite the limited resources since that department is tasked by the government to follow up on schools' operations and progress.

### **5.4.3 Team Work**

Team teaching is utilised when two or more teachers share the workload including the teaching of a group of students or class. Team work or team teaching is useful

when dealing with large classes. SL1 explained that team teaching makes a big difference in students' learning, especially with subjects that have enough teachers, but pointed out that most subjects do not have sufficient teachers for this teaching approach to be applied. SL2 qualified this, saying that team teaching can only be productive if teachers work well together, develop a mutual working relationship and put the interest of the students before everything else. On the other hand, SL3 argued that:

*It is not easy to maintain team teaching in our school considering the fact we frequently encounter teachers' absenteeism. Most discussions and sharing of information can only be done during departmental in-services or meetings.*

The best way to encourage team work is by doing lesson observations and giving advice where possible. T2 said that even though they have started to do team teaching it becomes an extra load for teachers who already have so much to do. Additionally, T3 and T7 pointed out that team teaching is arguably challenging but can be successful if teachers develop a mutual relationship and get along well together by working with each other's strengths and weaknesses.

The following comment by T4 illustrates that point:

*Using team teaching relieves work pressure, makes a difference with timing. It is appropriate for sharing workload. This approach also helps with developing teaching and learning approaches. In fact, because of this approach, we were able to do quite well in the grade ten National Examinations last year. The two teachers had a good working relationship and were seen discussing and helping each other out with teaching skills and techniques.*

However, two participants in the focus group interviews shared the notion that team teaching would be possible if teachers were able to teach all subjects. Currently secondary school teachers are specialised in teaching only one or two subjects. Unlike primary schools, secondary schools in PNG do not have the capacity to accommodate enough specialised teachers to match student numbers. Team teaching would be achievable in secondary schools if there were more specialised teachers or if the teachers were trained to teach all subjects so they could help out where and when needed.

#### 5.4.4 Collaborative Learning

The main discussion in each interview related to creating study groups. Students' study groups or collaborative learning can be described as a learning strategy that involves "two or more students working together towards the same goal" (Hill & Hill, 1990, p. 7). Collaborative learning, as the findings show, allows for easy access to successful teacher student interaction and, to some extent, the management of large class sizes. One school leader explained that teachers are assisted to create students' study groups. However, not all subjects are able to create study groups or collaborative learning groups because of classroom size and the availability of classrooms. Nevertheless teachers are encouraged to use this learning approach since it helps with managing class size, to which SL2 added:

*It is easy for subjects like advanced Maths classes to create collaborative learning groups. They are a small class and so there is enough classroom space because groups need to spread out in an open room so that they can spontaneously discuss and be easily assisted by the teacher. However, having less than five students in a group will only create more groups.*

Agreeing with this view, SL3 explained that they cannot organise student into work groups in the classroom due to classroom space, but added that it is possible to do so under the trees, on the school grounds or in the hall where there is plenty of space and it is easier for teachers to move around. T1, on the other hand, observed:

*We are involving all teachers in the department to teach a certain grade at the same time. We are creating study ability groups for students. Teachers in my department have taken on collaborative learning by involving all teachers within the department to teach a certain grade, all at the same time. Students are divided into smaller ability groups and are guided in their learning.*

Even then, T2 explained, students need to learn to trust each other to work well together. Similarly, another participant agreed that even though collaborative learning helps in managing class size, some students rely on others to discuss and present group work on their behalf. Teachers would need to closely monitor the participation of students in this learning approach. T4 pointed out that school leaders would need to help ensure that these groups are fairly supported by

classroom teachers. Collaborative learning is effective if students trust each other to share ideas and discuss solutions to problem questions openly. As T6 explained:

*The relationship amongst students determines the success of collaborative learning. At the same time, students with positive leadership qualities can be trusted to lead discussions in groups as some students are smart and reliable and can be trusted to take leadership roles.*

Consequently, T7 affirmed that it is easy to create study groups if classrooms are bigger than class size. He adds that teachers would need the space to move around and interact with students and the latter would also need the space to work or discuss without being disturbed by other groups. In upskilling teachers to manage large classes school leaders need to be assertive, consistent and conscientious in following up on what classroom teachers are doing and how they are coping.

#### **5.4.5 The Lack of Resources and Community Support**

Collated data from the findings also confirm that the schools are in dire need of resources and physical support from the community. SL1 stressed that it was of general concern that to effectively implement FEP the government and the department should assist the schools by improving facilities, increasing the supply of resource materials and recruiting more teachers to meet the demands of the larger classes. At the moment, deficiencies in these areas impede effective teacher-student interactions and in general, large class size management. On this same subject SL2 explained:

*The lack of resource materials and equipment is forcing teachers to be behind schedule with programmes and content cover. Some subjects do not even have resource materials to cover certain topics. Large class sizes are problematic when teaching slow or low ability students who need more time and help to cover subject content.*

SL3 said there are teachers' houses and classrooms that have remained unfinished since 2014, and this means that teachers live off campus and therefore rely on public transport to get to school. Having limited classroom space, T5 argued:

*We are still using the same classrooms we used ten years ago with smaller class sizes. It is difficult to effectively manage these classes because we*

*have students sitting on the floor due to a shortage of desks and chairs. When we run mock examinations, we send grade nine students home so we can use their classrooms. I believe it would be cheaper if the government refurbishes existing schools instead of building new ones. It will be easier if more classrooms, resource materials and teachers are added to the current schools in order to accommodate the growing population that FEP has produced.*

T1 stated that one of the ways in which these limitations could be minimised would be to have community support, especially from parents, and as T2 affirmed, teachers are entrusted by parents to assist students in passing the National Examinations and therefore need to support teachers as whatever way possible (T6). Other participants said that the help given by parents on weekends, especially in boarding schools and assisting in supervising students on field trips, would relieve teachers of some of their workload. T7 concluded:

*I think it would help if parents step in to help on weekends, since we are a boarding school. They could help with supervising clean up or students cooking their meals or help supervise students on field trips. Even though we get some financial help from them with our fund-raising activities, we need still their physical support. We are expected to implement this policy to commendably educate these students and with community support, this could be very helpful.*

The issue of limited resources and lack of community support are identified in the findings as issues that need to be addressed in order for classroom teachers to effectively manage large class sizes. When school leaders are fully supported by the community and department, their role in assisting classroom teachers effectively manage large class sizes will be achievable.

## **5.5 Summary**

Firstly, the participants' observations reveal that in their role as school leaders they face a number of challenges. These include the kinds and amounts of work class teachers do and the limited resources they have to work with. The school leaders must also identify teaching and learning approaches that will help teachers manage overcrowded classrooms and enable them to actively interact with the students in their large classes.

Secondly, the findings reveal that school leaders are challenged by the intense responsibility of ensuring that FEP is implemented effectively. The role of school leadership includes the competent development of school policies and practices that are appropriate for large class sizes. Overloaded teachers are expected to be innovative in their classroom preparations and presentations in order to assist students pass the national examinations.

Thirdly, the ability to successfully implement the Free Education Policy, especially in managing the resulting large class sizes, is impeded by: insufficient resources; inadequate facilities; lack of community support; and teacher shortage. Active and successful management of large class sizes could-be possible if these issues are addressed.

Finally, the findings reveal that school leaders are doing what they can, despite limited resources, to assist classroom teachers. However, there is need for teachers to: develop skills to enhance teaching and learning strategies in these large class size classrooms; communicate constantly; and organise discussions about class size management approaches. These are identified as vital components of successful class management, making effective teacher-student interaction attainable.



# **Chapter Six**

## **Discussion**

### **6.1 Introduction**

This chapter deliberates on the findings of the study that was carried out in two government funded secondary schools in the National Capital District of PNG. The findings are based on the investigation conceptualising the impacts of the implementation of the free education policy in these two schools. The theoretical lens of interpretive paradigm was used to guide the construction of this study. The findings were made feasible through the application of semi-structured interviews and focus group interviews as methods of collecting data. The participants in this study were the schools' executive teams or school leaders: the principal; deputy principals; and heads of subject departments. The significant finding that emanated from the data was that the implementation of the policy initiated a large increase in class sizes. The increase influenced how those in the role of school leadership exercised their responsibilities in decision making and in developing strategies that would facilitate the management of large class sizes.

Chapter six brings together chapters three, the literature review, and five, the results of my investigation, to gain an insight into the leadership experiences of the participants in implementing free education. This chapter elaborates on the three key findings regarding the influences and impacts of the change in policy obtained from the interviews carried out with those in school leadership. The findings with supporting literature are discussed under the headings of i) the Free Education Policy ii) school leadership and iii) managing class size. The discussions will include areas affected by the changed policy and these are: school policies and practices; the role of school leadership in decision making; and the management of class size in these two secondary schools.

### **6.2 Free Education Policy**

The study demonstrates that with the changes allowing more students to access better education (UNICEF, 2013), the role of school leadership in Papua New

Guinea has been significantly influenced by the Free Education Policy and its effects on class management.

Key concerns that stipulated the implementation of FEP include: the need to keep more students in schools and to advocate values of fairness and equality (Avolos, 2006); the problems associated with illiteracy, since the government is unable to provide schools for all potential students (O'Donoghue, 1995); the need to reduce poverty levels (Curtin & Nelson, 1999); and the fact that Papua New Guineans do not receive unemployment benefits (Marshall, 2002). If students were able to freely continue into secondary school, they would leave school-with more skills and be able to take care of themselves (Marshall, 2002). The Department of Education's *2003 Annual Report* (2004), in alignment with the findings of the study, implied that specific policies, such as FEP, would create an increase in access to education at all levels by 2015; thus, on average class sizes in the schools in the study are between forty-eight and fifty students. The increase has created changes to school policies and practices which are key features that guide the organisation and progress of schools, to which Bell and Stevenson (2006) point out that as policy emerges and develops, it moves from formulation to implementation.

The effectiveness of FEP's implementation depends heavily on those in school leadership and their level of communication with classroom teachers on the management of class size. Since schools are required to implement government policies, changes in the organisation and operations of schools are expected to be initiated. As a result, the success of implementing FEP will depend largely on how successfully that guiding principle is implemented in the schools (Cooper et al., 2004). Therefore, since this policy is politically motivated, the power of FEP's existences, is determine through the management, administrative, teaching and learning roles of school leadership (Heiman, 2012). It is then the responsibility of school leaders to ensure that directives from the national and provincial education departments result in positive outcomes. For these reasons, school policies, school routines and practices, subject allocations and teaching loads, and teaching and learning strategies are vital school elements that need to be addressed by school leaders and teachers, especially if these elements are affected by the change in policy (Bell & Stevenson, 2006).

### **6.2.1 Changes in School Policies**

The findings reveal that the implementation of FEP (“Institute backs growth of education”, 2015), has resulted in policy changes in schools that are affected by class size. The participants described how the increase in class size had resulted in the administration of more theory tests rather than practical assessment projects since teachers are unable to meet assessment deadlines due to the amount of marking that needs to be done. They further reported that even though the OBE curriculum is in use, progressive assessment has become impossible to use because of large class sizes. Furthermore, participants in the focus group were apprehensive about the large class sizes in these two upper grades since they are expected to work intensively with students in preparation for the School Certificate examinations, as the education system allows only students who have passed these National Examinations to proceed into the next grade level or continue through to tertiary study. At the same time, school leaders need to ensure that grade content in each subject is well covered before the end of each school year.

In implementing FEP, the government pays a subsidy for each student; but as Swan and Walton (2014) and NRI (2004) clarify, that subsidy does not into account location, availability of resource, or the general cost of providing education in these schools. The participants in this study added that due to insufficient resources, teacher shortage and inadequate school facilities additional clauses are being made to departmental policies, particularly to meet deadlines. The roles of school leaders would therefore, demand flexibility and adaptation to these situational changes (Ben-Peretz, 2009). Travers and Cooper (2012) elaborate that not having adequate or the right kind of resources within schools may not allow policy implementations to be carried out effectively, which would be stressful for teachers. Thus, cooperation amongst teachers is both the subject and object of change as it is the view of policy makers that change is achievable through the collaboration of school leaders and teachers (Hoyle & Wallace, 2005).

The respondents further stated that the types of assessment and assessment weightings had been modified due to the increase in class size, giving teachers the time to cover subject content before the end of the school year, despite being unable to attend to individual students’ needs because of class size and

overcrowded classrooms. As revealed in the findings, the reason for the changes in assessment policies is that teachers are pressured to prepare grade ten and twelve students for examinations, even though students are skipping classes because they are either taking advantage of the large class size or do not have the same teacher for all lessons. The participants also said that they were further challenged because more students with special needs are also attending school (Waketsi, 2015, 11 June) and teachers are not trained to assist these students effectively. It is therefore evident that FEP has created a wide range of setbacks to the delivery of high quality education; and—a call has been made to relevant authorities to review the changed policy (“Education policy not working well”, 2015). On those grounds, policy makers who authorise these directives need to be aware of the possible negative effects of these modifications and therefore have strategies in place to rectify them (Rosekrans, 2006).

### **6.2.2 Changes in School Practices**

The findings from the semi-structured interviews reveal that changes are being made to school practices that are considered to be either too flexible or non-applicable for large class sizes. As Rosekrans (2006) notes, when changes are being made group effort, open discussions, continuous dialogue between school leaders and teachers, and precise decision-making are keys to successful policy implementation in learning institutions. The participants explained that the main changes in school practices included disciplinary guidelines, extra-curricular activities, and increased awareness of students’ safety and wellbeing. Furthermore, due to large student numbers and school locations, school leaders are having to prioritise and make changes in order to keep their school in operation (“Free education plan not best”, 2015). Due to funding constraints, schools are going out of their way to develop practices to deal with this change in policy (Wranga, 2014). For example, having to move students to and from school daily with limited transport can be difficult, especially if the number of students is large and many need to make bus connections to get home. Despite the increase of girls attending school as influenced by FEP (Nicholas, 2015, 7 May), the girls, in one of the schools of study, are let home early due to the large number and lack of

school transport. This affects what students are able to do during the time they are in school each day.

In addition the findings reveal that changes are made to other school practices to allow for effective large class size management. In one school, additional clauses relating to disciplinary guidelines were made mandatory because the school leaders and classroom teachers found it difficult to effectively keep track of students' discipline in the larger classes. Students who are struggling academically, or are disruptive, lacking concentration, or skipping classes and are not able to complete given work on time, add to the challenge for classroom teachers. Changes to guidelines that relate to these school practices make it easier for classroom teachers to be consistent in dealing with such students. For these reasons, teachers need to be analytical with practices that are problematic to large class sizes as the logic of meeting the needs of the students is partially unpacked in the official aims and goals of the implemented policy (Hoyle & Wallace 2005). Therefore, the success of policies can be recognised through careful analysis and consideration of their practices (Heiman, 2012).

In the face of resource material shortage, involving more students in more out of class activities was seen as a way of engaging students and keeping them out of trouble. This is a result showing that the school leaders are utilising policy changes (Ben-Peretz, 2009) effectively, otherwise teachers may not implement this change efficiently since the way the school leaders view this change in policy will have an impact on how the teachers respond to it. From these viewpoints, the environment of any learning institution is greatly impacted by how policies are implemented (Bell & Stevenson, 2006) given that educational changes which include change in policies are easy to propose but may be difficult to implement, especially if school leaders are uncommunicative and teachers are not responsive (Hargreaves & Fink, 2006). The findings therefore support those of Ben-Peretz (2009) that when faced with limited resources to accommodate large class sizes, clear decisive changes by school leaders are essential in implementing changed policies.

## **6.3 Educational Leadership**

The role of school leaders needs to be clearly defined in addressing the increase in class size. Participants revealed that the role of school leadership in implementing FEP is difficult and challenging, as they are aware that educational leadership includes the ability to nurture learning and to develop change through collaboration with colleagues (Caldwell, 2006). The type of leadership practised by these participating schools is transformational or “distributed” leadership, as the role is—a one of shared responsibility, with more than one person involved in decision making (Harris, 2004). As Lawn (2013) explains, leadership is recognised as the influence that shapes the environment of the organisation. He refers to leadership as the “living force” or human drive that takes the organisation to the next level. Moreover, Vulliamy (2006) suggests that school leaders should also be willing to take on an active role in the in-service development of teachers. However, the participants felt that being tasked with other duties apart from teaching lessons made it hard to find the time and space to take on a successful role in in-servicing classroom teachers. They explained that communicating with classroom teachers on how to manage class size was generally left to the HODs, part of whose job is to ensure that the syllabi and curriculum of their particular subject content are imparted to the students.

As school leaders, these participants have the mandate and the power to work alongside subordinates to create ongoing improvement within the school environment (Preedy et al., 2012). Simosson and Munoz (2012) point out that when individuals are guided by others, they need to feel that they have a voice within their place of work and therefore feel encouraged to respond constructively to the changed policy. For these reasons, by taking the initiative and with constant dialogue and working collaboratively with classroom teachers, school leaders can realise the school’s vision.

### **6.3.1 Addressing the Change in Policy**

One of the core findings in this study is that in addressing this change in policy the participants encountered rather more drawbacks than benefits. For example,

the respondents pointed out students were often not able to take the subjects of their choice at secondary school due to the limited number of specialist teachers. Another problem is that the fact that eighty percent of the total PNG population lives in rural exacerbates the effective implementation of FEP (Brydon & Lawihin, 2013). The respondents in the semi-structured interviews also affirmed that FEP has overloaded teachers with school duties and responsibilities as a result of the increase in class size. Consequently, the implementation of FEP has not been easy, and given, also, the limited resources available to the bigger classes, school leaders are further challenged to as they endeavour to support classroom teachers. At the same time teachers are urged to share and use teaching and learning strategies within subject departments in order to assist students effectively within the given time allocated for each lesson.

All these impediments add to the challenge of effective FEP implementation. While commending the government for introducing FEP, the former chairman for Coffee Industry Corporation has reiterated that there have been more negative than positive implications since the inception of the changed policy ("Education policy not working well"). For these reasons, schools need to also be fully staffed in order to effectively address FEP. As revealed in the findings, when there is a shortage of teachers or if teachers are absent, a large number of students are left on their own, giving them the opportunity to get into trouble. Increasing the number of teachers per school could be done by increasing the level of the school. The respondents further explained that at the time of the study teaching and learning strategies, such as group study and team teaching and having experienced teachers act as mentors are the two main tools they were using to accommodate the change in FEP. In addition, ongoing communication between school leaders and classroom teachers has also been identified as an effective tool in the management of change (Foskett & Lumby, 2003).

Another point raised by the participants is that the national government should have ensured that some kind of feasibility studies been were carried out prior to FEP's implementation so that schools could be well prepared and equipped to take on the increase in student population. (As one example, the respondents asserted that doing science experiments, especially in overcrowded laboratories, was a serious concern for teachers.) For that reason, secondary school teachers in one of

the outer provinces organised a conference focused on identifying teaching strategies that would address such issues (Wranga, 2015, April 1).

While the government sees the need to uphold values of equality and fairness by keeping children in schools (Avalos, 2006), the participants considered that the government had failed to address the problems of availability of facilities and resource materials and the teacher shortage prior to establishing this directive. The prime minister is reported as saying that the government's aim for the Free Education Policy is not only to get more children into schools but also to ensure that the schools are appropriately resourced ("Government committed to school upgrades", 2015). However, the respondents argued that while the policy gives the opportunity for education to children whose parents are either unemployed or are low income earners (Bray, 2007), scarcity of resources is setbacks hindering effective class size management once children get to school. Similarly, the Opposition Party argues that the government has lost control of the management of FEP, and claim that there strategic planning is needed to sustain it (Belden, 2015, 13 April). For these reasons, the participants maintain that due to the lack of government funding, schools in the country were planning to close due to the lack of funding. However, the prime minister declares that there is no need for schools to close since funds had earlier been released for FEP (Issac, 2015). This statement was made by the PM when responding to media reports that over thirteen thousand schools had opted to close due to the lack of operational funding (Issac, 2015).

These are critical issues that need careful negotiation and for these reasons, collaborative discussions between school leaders and classroom teachers are both the subject and objective of transforming the Free Education Policy into one that is successful and thriving (Hoyle & Wallace, 2005). As Ball (1998) explains, school leaders have to ensure that any change in policy is well prepared for. These leaders and classroom teachers need to negotiate their way through national policy changes to perceive what is best for the students (Alcorn, 2011). Even though a number of school leaders in the study were open-minded to this change in policy, large class size makes it difficult for classroom teachers to meet deadlines, attend to students' individual needs, be able to provide sufficient resource materials for their students, and find ample classroom space. The respondents said that they



were very conscious of the importance of assisting classroom teachers to effectively manage their large classes; however, schools needed to be well equipped with facilities, resources and teachers to allow successful class management. Participants also agreed that living on campus or near the school grounds and being knowledgeable and skilful in addressing contextual changes (Blase, 1993; Alcorn, 2011), have their advantages.

The findings also disclose that school leaders are mindful that they are required not only to enact the policy but also to ensure that they create an environment in their schools that encourages advancement and development in implementing the change. Since their outmost role is to improve the achievement of students in the school (Taylor & Cava, 2011), the respondents were aware that survival for these students in the city depends on being educated and earning a living. Classroom teachers are encouraged to view FEP from that perspective when attending to students and are therefore urged to be resourceful and creative in how they organise their classroom presentations in managing large class sizes. McBerth (2008) and Alcorn (2011) affirm that the communication about school organisation and progress between school leaders and teachers has to be transparent and precise in order to instil collective confidence in teachers about managing large classes. School leaders and classroom teachers must work together as a team. Hoyle and Wallace (2005) reiterate that apart from setting the path for the school, school leaders need to work closely with classroom teachers, to make deliberate plans, and to motivate, inspire and make new things happen so that the institution moves forward. The success of the school further depends on the performance and effectiveness of school leaders and how they communicate this change in policy to classroom teachers (Bell et al., 2003). Leithwood et al. (2002; 2010) add that by communicating this change in policy, school leaders can identify how classroom teachers respond to leadership decisions and directives.

The general interpretation of data from the interviews, therefore, reveals that the task of fulfilling FEP is onerous, in the face of insufficient facilities and resources to accommodate large class sizes, even though schools are pressured to ensure that grades ten and twelve students pass the School Certificate examinations. Classroom teachers therefore need the support and active involvement of school leaders to achieve national educational reforms and at the same time assist

students to pass the National Examinations (Lee, 2014). The respondents were aware that the credentials of their school's performance depended on the results of the national examinations. In this case, school leaders are in the position to inspire the achievement of positive individual and shared results in a manner that is both applicable and operative (Buchholz & Rosenthal, 2005). Being focused, competent and consistent are key requirements to developing, guiding, implementing and channelling this change (Johnson, Jnr. & Kruse, 2009). Even then, the participants argued that despite being in the country's capital city these two schools were unable to get additional resource materials from the Curriculum Branch of the Education Department. Faced with these issues, school leaders should not only implement national policies but should also generate these policies (Bell & Stevenson, 2006). This could be done exhorting through avenues that will help sustain the FEP. "On the ground" teachers would need to self-evaluate their strengths and weaknesses, the particular impediments to their management of large classes and how they overcome them, through reflective writing (Pickford, 2004). This should help enhance their management approach despite limited resources and inadequate facilities.

### **6.3.2 Decision Making**

The findings reveal that it is crucial for school leaders to assist classroom teachers through decisive decision making to effectively manage large class sizes. The participants in the semi-structured interview said that the decision-making role of school leaders is seen as a vital component in addressing this changed policy. McBerth (2008) and Acorn (2011) add that the channel of communication between school leaders and classroom teachers has to be transparent and defined. Making productive decisions is at the heart of leadership as the success of schools depends on the kind of decisions made and how they are carried out (Johnson Jr. & Kruse, 2009). The participants also explained that making decisions about effective management of large classes is often impossible. With limited resources, they are unable to develop a variety of teaching and learning approaches that would effectively accommodate large class sizes. These are setbacks that school leaders would need to work and improve (Adams & Krockover, 1998).

Participants reported that the shortage of specialised teachers for grades eleven and twelve is causing grades nine and ten teachers within the general field of the subject to be “pushed” to help out in the upper secondary level. Vulliamy (2006) explains that this is where school leaders need to be willing to take on an active role in the in-service development of teachers and that while making decisions, they need to be mindful of how these decisions affect the teachers. The implementation of policies is facilitated by the kind of decisions made in terms of action, emphases, and allocation of resources (Adams & Krockover, 1998). The participants felt that maintaining open channels of communication with classroom teachers is essential in identifying teaching and learning approaches for useful classroom presentations. Johnson Jnr. and Kruse (2009) explain that when school leaders make good decisions that highlight issues that are fundamental to the progress and growth of the institution, this leadership form is embraced by those affected by the change. The participants further noted that the number of low ability students has increased due to the significant rise in class size. Assisting these students effectively also needs to be addressed by school leaders. The participants also suggested that one way of addressing this issue is by giving more classes especially to experienced teachers to teach.

On the other hand, Gorard (2005) argues that the problem is not about deciding on what method to use but rather on using the strategies that will work successfully in implementing the policy. However, the participants in the focus group maintained that deciding on the method is an issue. For example, students’ field trips are often cancelled because extra teachers are needed to supervise them and this then leaves the school with fewer teachers. This is an area that school leaders need to address in collaboration with classroom teachers, as field trips contribute to students’ learning (Hallinger & Heck, 2010). The art of decision making for the management of large classes must be taken seriously if schools are concerned with high quality education. Identifying and applying appropriate teaching and learning approaches, creating a rapport with other teachers within subject departments and establishing open communication links between school leaders and classroom teachers are all essential components of practicable large class size management. Blase (1993) recommends that school leaders carry out research into how other leaders strengthen and encourage their subordinates in order to develop

strategies to enhance their roles as decision makers. The participants said that teachers spend a large part of their weekends doing school duties, especially in marking and classroom preparations. They argue that the amount of time available during school hours is insufficient to mark work belonging to over forty-five students multiplied by the number of classes they take. For all these reasons classroom teachers would need the support and guidance of school leaders through mentoring (Arthur et al., 2003) since these leaders are expected to be leading though the decisions they make (Blase, 1993).

### **6.3.3 Workload**

The kind and the amount of work that teachers have to do includes: classroom preparation and presentation; assessment preparation; and marking and extra-curricular or out of class school duties. Leithwood et al. (2004) and Gosky and Akdag (2014) add that apart from classroom preparations, teachers also carry out pastoral and administrative tasks such as guidance and counselling, teacher-parent correspondence and monitoring students' attendance. As the findings reveal, teachers have to do twice or three times more than they were doing prior to the implementation of FEP. As explained by Goksoy and Akdag (2014), work overload is perceived as the amount of work that is imposed above the level required by the Ministry of Education. According to the study, a base level teacher has a teaching load of thirty-two periods per week, leaving them with eight non-contact periods for preparations and other "paper related" work. Almost all the participants felt that due to the large number of students, the amount of preparation and supervision responsibilities outweigh the actual number of teachers in the schools. Vulliamy (2006) argues that being overloaded and underpaid are moral issues that have an impact on the way teachers carry out their teaching and other responsibilities and therefore is a concern to be addressed by those in authority (Bacchus, 2006).

Clearly, the teacher-student ratio figures are not relevant to the number of students and classes that are taken by teachers. According to the Department of Education (2002), the teacher-student ratio is one is to eighteen. The average teacher-student ratio according to the two schools in the study is one is to twenty-eight (based on

the two schools' *Census Reports 2011-2015*). The teacher-student ratio would be applicable and valid in primary schools since teachers at that level take the same class for all subjects. This is not the case with secondary schools because teachers are specialised in subjects they are trained to teach. This supports the claim that teachers are overloaded depending on the number of specialised teachers for each subject and the number and kind of subjects that are offered in each secondary school. The respondents argued that attending to these responsibilities takes time, is demanding and can amount to twice the work for teachers of large classes. The amount that teachers receive in remuneration does not equate with the long hours they put into the work they do (Agigo, 2007). The respondents explained that the large number of students means there is plenty to do but not enough time. Classroom teachers have to plan and teach, and also evaluate their own teaching as well as their students' learning (Goksoy & Akdag, 2014) and even though the average teaching load is between thirty and thirty-two, a high percentage have a teaching load that is beyond these figures because of the shortage of teachers. This means that out of forty lessons in a week, teachers have less than ten non-contact lessons for lesson preparations, meetings and other "paper work" responsibilities. The findings also reveal that when female teachers go on maternity leave or if someone is away for compassionate leave, their classes are taken care of by HODs, adding to what HODs have already been assigned to do. The government, with the assistance of school leaders, needs to identify the long-term effects of overcrowded classrooms (Bacchus, 2006), with the aim of addressing teachers' workload as part of effectively realising FEP.

HODs in the focus group interviews said that because they do not have substitute teachers or teacher aide, managing large class sizes is a challenging task, in managing control transfer and evaluate information in the classroom with over forty-six students, are the responsibilities of one teacher (Easthope & Easthope, 2000).

To meet deadlines, teachers have to work over the weekend to prepare, plan or mark students' work, tests or examinations. The additional hours that teachers put into doing school work could have an impact on managing large class sizes since teachers need time to reflect on their work, plan lessons well, develop skills and knowledge and interact with colleagues (Bubb & Earley, 2004). Finn et al. (2003)

affirm that based on research, disruptive conduct of students is related to depressing academic presentations of teachers of large classes. Because teachers are overworked, they need the time to prepare well so that they are able to deliver even at the level of low ability students. The participants also contended that they need good quality time to assist these low ability students since the number has doubled in the increased class sizes.

Guy (2009) argues that the implementation of FEP in secondary schools has come with insufficient guidelines for teachers to apply this policy effectively. Teachers are expected to meet policy standards even though they are given very little assistance in managing large class sizes by policy makers (Alton-Lee, 2003). It is crucial that teachers are assisted in managing large class sizes as it creates a positive teacher-student relationship and the interaction level between the two groups is higher, developing a sense of motivation and support among teachers and students (Yunus et al., 2011). Classroom teachers should therefore be assisted by school leaders since teachers suffer a greater level of stress compared to other professions due to the amount of work they do (Bubb & Earley, 2004). In addressing this issue, the participants decided that team work, open discussion channels, and developing a positive working relationship between school leaders and classroom teachers can ease the burden of workload. Vulliamy (2006) concludes that attending to issues that affect teachers will boost their morale and in this case enable PNG teachers to manage their large classes with confidence.

## **6.4 Managing Class Size**

The findings in the semi-structured interviews reveal that managing large class sizes is a challenging task due to limited resources. Finn et al. (2003) assert that class size affects not only how well teachers are able to manage students' participation but behaviour control and teacher-student interaction as well. Graue et al. (2007), contend that class size may also influence how often teachers are able to interact with a larger group of students since classrooms in these two schools had not been extended nor renovated to accommodate large class sizes. They are the same rooms that were used ten years ago for smaller class sizes. It

would be advantageous for schools if the government subsidy included the cost of upgrading infrastructures and classrooms (“Education policy not working well”, 2015). However, despite these setbacks teachers are expected to effectively teach large class sizes and at the same time produce good results in the National Examinations as they are challenged to produce results with limited resources. Murawski (2009) argues that class size problems can be contained if teachers lay out classroom guidelines and rules that are clear and precise. The participants, however, felt that it is still difficult for one teacher to manage overcrowded rooms successfully, especially with over forty-six students. Previous research does disclose findings that it is easier to manage smaller classes (Finn et al., 2003; Graue et. al., 2007).

When students’ results show that the school has not performed well in the national ratings, the school becomes the focus of interest for both the Education Department and the parents. According to the participants the Department as well as the parents should be in close contact with teachers in order to be aware of the challenges of managing these large classes with limited resources. As school leaders, the respondents encouraged team teaching and group study as tools in large class management. Even though it is not an easy task, HODs are challenged to assist teachers within their departments to be assertive in developing large lass management strategies. Finn et al. (2003) point out that there is a connection between class size and collaborative teaching styles. Through classroom modifications and as primary agents in regulating teaching approaches and planning techniques, teachers can use their classroom abilities to manage these large classes skilfully (Lopez, 2007). On those grounds, school leaders must be innovative and assertive in working with classroom teachers in bringing out these classroom abilities. Mathews (2009) adds that school leaders should be challenged to provide opportunities to inspire and energise teachers to be creative, and be proactive in managing these large class sizes. Even though classroom teachers are sharing ideas they still need the support and assistance of school leaders to address these issues confidently; as Hallinger and Heck (2010) affirm, it is easier if class teachers are supported through shared leadership. Since these two schools practice “shared leadership”, classroom teachers can be given sufficient help as there is more than one school leader (Harris, 2004). Additionally, Leithwood et al.

(2010) elaborate that the a successful outcome depends on collective confidence amongst teachers and this should be consolidated by school leaders when encouraging subject departments to develop manageable learning and teaching approaches for large classes.

Even though teachers are encouraged to develop manageable learning and teaching approaches to successfully manage large class sizes, however, on the other hand, finding the time to use such approaches this effectively is a problem. The focus group participants explained that one of the problems in challenges of effectively managing large class sizes is the amount of official and teaching time, which leaves little time for. The lack of timing contributes to the inefficiency in managing large class sizes as well as successfully attending to the needs of the large number of students. For these reasons, school leaders are further challenged in assisting classroom teachers to manage large class sizes under deficient conditions and therefore need to be realistic and conscious about how much teachers are doing when addressing this issue (Bubb & Earley, 2004). The respondents further explained that managing large class sizes is also a challenge since it requires consistent data analysis. For example, because of the class size and overcrowded classrooms, their work in students' report writing is disadvantaged by the fact that they know very little about their students due to inadequate student-teacher interactions. This makes it difficult to write fair comments on students' reports because of large class sizes to one teacher per forty minutes per lesson. The participants maintained that it would be helpful if more resources were made available in schools to help manage the growing size of the student population.

#### **6.4.1 The Availability of Facilities and Resource Materials**

A crucial argument presented by all participants related to the lack of adequate facilities and resource materials to effectively teach large classes. Adequate facilities and sufficient resource materials are vital components of successful large class management. The National Research Institute (NRI) affirms that in PNG secondary school facilities are either inadequate or are in poor condition (2004) and as Salmang (2015, 17 March) explains, school facilities and upgrading of



these facilities is a concern for parents who are apprehensive about the quality of education children are receiving due to the overcrowded classrooms created by this changed policy. Furthermore, Leithwood et al. (2004) confirm that parents' reason to be concern is genuine because students who are struggling academically do miss out on active class participation and therefore are unable to interact or get sufficient help from classroom teachers. Bray (2007) adds that the accessibility of resources for both teachers and students would determine the effective use of teaching strategies that are applicable to large class sizes because subjects with more than fifty students have to be taken in the halls. This indicates that schools have limited capacity to assist in the growing number of student enrolments with existing facilities. Mr Komba argues that since FEP was intentionally a political convenience, core issues that should able this policy to work are not equally addressed ("Education policy not working well", 2015). Participants in both the semi-structured and group interviews asserted that attending to the needs of individual students is a challenge as the overcrowded classrooms leave no space for teachers to move around freely. For these reasons, Finn et al. (2003) assert that an overcrowded classroom has a negative impact on teacher-student interaction. Furthermore, due to the overcrowding, students can easily copy from each other hence students are taken to the students' halls for lessons or grade nine students are sent home in order for examination grades to spread out in their rooms during National Examinations.

Additionally, Bray (2007) and NRI (2004) found that secondary schools report that resources for teaching, textbooks for students, and books for the library and staffroom are limited. Teachers as well as students in the two schools in the study have to share resource books for this reason. The participants said that their schools were ill equipped for effective management of large class sizes, thus limiting the quality of teaching (Agigo, 2007). For this reason, parents support the schools by either buying resource books for their child or photocopying teaching materials for teachers. Alphonse (2015, 19 March) elaborates further that despite government regulations on school fee payments, parents of students attending Kagua Secondary School in Southern Highlands voluntarily paid K200 per child as project fees to assist in improving infrastructure at the school despite government regulations. Bray (2007) says that education is therefore never free as

families still have other cost issues to deal with. Ultimately, Kim and Anderson (2012) explain, schools will still be challenged to provide an education system that is accessible, relevant and of good quality despite the free education policy in Papua New Guinea. This is because even schools in outer provinces have not received their share of resource materials from the National Education Department for the 2014 academic year (“Stationeries not sufficient”, 2015). With the overcrowded classrooms, there is lack of basic facilities such as chairs, desks, and teacher shortage in school due to FEP (Waketsi, 2015).

In addressing this issue, teachers are preparing charts and worksheets to aid them in their teaching. However, teaching science and subjects that involve a practical component demand a lot of time and lessons are difficult to prepare (Arokoyu & Ugonwa, 2012). Teachers have to be innovative through researching alternative materials that can be used in place of the main resource books. Schools in the study have buildings that are incomplete because contractors claim that they have not been paid by the government (Setepano, 2015). Despite trying to address these issues, the need for more resources and teacher training still remain as a challenge for the Department (UNICEF, 2013).

#### **6.4.2 Human Resource Enhancement**

Most school leaders held positive views that teachers need to be upskilled in managing large class sizes since leading and managing are work practices that are considered to be challenging (Gronn, 2003). The findings reveal that as there are more students and fewer teachers, organising and developing teaching and learning strategies are paramount to managing large class size. Teachers are supportive of the increase in knowledge in learning about how they can better manage large classes and the use of resource materials for classroom teaching and training proficiencies (Johnson & Kruse, 2009). Respondents in the semi-structured interviews explained that the organisation and monitoring of effective classroom presentations is extensively left to the HODs since they are in charge of subject departments. They add, however, that teachers need appropriate skills to successfully apply these different classroom presentation styles in order to actively involve all students in large class size classrooms.

Teachers need time to learn and develop in order to meet the expectations imposed on them and address the challenges that they are faced with (Sparks & Hirsh, 2000). A participant added that as part of FEP, students with special needs are also enrolled. Teachers need to know how to effectively attend to these students' needs. Not having the appropriate skills and knowledge could be seen as an impediment to implementing FEP because it will affect the standard of education for these students (Vulliamy, 2006). A key role, therefore, in the change process is not only to implement the change, but to train and develop teachers so that they know how best to implement the change (Bubb & Earley, 2004).

Even though school leaders are doing all they can to assist classroom teachers, they need to familiarise themselves with applicable and appropriate skills in managing large class sizes effectively since it is still a matter of concern in PNG secondary schools (UNESCO, 2011). The concept that teacher quality is the core of educational reforms has been acknowledged by educationalists (Tienken & Achilles, 2005) and therefore, justifies that teachers need knowledge, skills and the right kind of attitude to help them address contextual changes (Alcorn, 2011). Despite attending a national in-service week each year, the participants explained that the amount of time is insufficient to help them assist students; especially those with special needs or to develop learning and teaching strategies that are applicable in managing large classes.

The findings also demonstrate that experienced teachers are expected to mentor, guide and enhance other less experienced teachers within their departments. According to Simonsson and Munoz (2012) and Hallinger and Heck (2010), positive influences in making sure that these new practices and instructional changes are carried out well, is to mentor others within the organisation. Beginner teachers and teachers with very little experience need to be guided by experienced teachers (Holloway, 2001; Arthur et al., 2003). However, the participants went on to say that teachers are further overloaded when schools try to use experienced teachers to mentor other classroom teachers in class size management, even though they have identified that to better manage large class sizes includes using appropriate teaching and learning approaches, amongst them utilising experienced teachers as mentors.

Leithwood et al. (2004), however, argue that there is great concern about the teaching load given to teachers. As teachers are already overloaded, very little mentoring or none at all is carried out. Even then, the participants were aware that teachers need professional enhancement by either the Education Department or school leaders to offer guidance in using teaching and learning approaches that are relevant in dealing with large class sizes. Ongoing teacher training plays a vital role in effective policy implementation (Guy, 2009). The participants asserted that teachers are challenged to educate students with little or no assistance from the Education Department. The Ministry of Education is accountable for equipping schools with teachers nationwide; educating teachers is an important part of this responsibility (Ben-Peretz, 2009). Therefore, on behalf of the Education Department, standards officers are responsible to ensure that teachers are able to manage large class sizes despite the limited resources. PNG standards officers are responsible for support and teacher professional development in secondary schools (UNESCO, 2011). If schools are expected to assist students to pass national examinations, the need to be assisted both in terms of resources materials and human resource enhancement by the department is paramount. The participants therefore felt that there was a need for sufficient scheduled space and time within official hours to prepare adequately for successful large class size management, since the level of teacher training and development programmes provided by the Department is very poor (Agigo, 2007), even though the 2003 NED Report states that there is now greater access to teacher training in the country (2014).

Together with the increase of class size a high percentage of grade nine students are enrolled with Grade Point Average (GPA) that are above average. However, some of these students are not coping with the grade nine syllabi. Nevertheless, teachers are expected to help them pass the National Examinations when they ~~do~~ reach grade ten. At the same time, when students do not win a place in tertiary institutions after doing grade twelve, queries are raised by both the parents and the Department regarding why students did not pass these examinations. Even though Iningi (2015, 16 April) reports that FEP is not the best policy to produce human advancement, Gorard (2005) explains that the problem is not about deciding on what method to use, rather it is using the strategies that will work to successfully

implement the policy. School leaders thus have a fundamental task in delivery of teaching and learning practices that are applicable to the school. This could help them cultivate strategies in which they can best carry out in their responsibility as decision makers.

### **6.4.3 Team Work**

One teaching approach that is used in managing large class sizes as reported by the respondents in both the semi-structured and focus group interviews is team work. Team work describes two or more teachers sharing in the teaching of the same group of students or class (Plank, 2011). As teams, teachers can address problems of classroom management, get assistance from each other in helping students and share the workload (Troen & Boles, 2012). Most participants agreed that the use of team work or team teaching as a schooling technique does have its advantages when working with large classes and Murawski (2009) affirms that attending to students' needs becomes less demanding when more than one teacher is in a class to facilitate classroom control. Participants who used team teaching agreed that students are better helped when more than one teacher is in the class. For example, grade ten students in one of the two schools performed well in the National Examinations because of team teaching. The teachers involved had a good working relationship and were seen discussing and helping each other ~~out~~ with teaching skills and techniques. This suggests that team teaching can change the culture of the school, in the way that students learn, and in how teachers work together to support learning, and to achieve a common goal (Walker et al., 2001). Trown and Boles (2012) add that the technique is appropriate for sharing workload, relieves work pressure, saves time for better planning and preparations, and is applicable for use with large classes. For these reasons, using appropriate teaching styles are vital elements especially in managing large class sizes (Alton-Lee, 2003).

On the other hand, participants thought that team teaching can only be productive if teachers develop a mutual working relationship and put the interest of the students before everything else. Teachers need to work collaboratively (Montague & Warger, 2001) through constant communication and by maintaining a

reciprocal relationship (Troen & Boles, 2012). They emphasised that team work is arguably challenging and can be successful if teachers get along well together, ~~and~~ build on each other's strengths and stand in for each other's weaknesses. Thus team teaching should be developed through the support of school leaders (Murawski, 2009). By enhancing positive communication skills and helping develop a rapport between the members in the group, team teaching can become a resourceful tool in managing large class sizes.

However, most subjects do not have teachers to elicit this teaching approach; and because secondary schools teachers are specialised in one or two subjects, they are unable to effectively help out in subjects other than the subjects they are trained for. For this reason, the Education Department should prepare secondary school teachers to be multi-trained, able to teach more than one subject and therefore work with any other teacher (Bottery, 2004). The respondents also argued that it may not be easy to maintain team teaching due to teachers' absenteeism and not having ample time to prepare as a team. Since some teachers live off campus they would have very little time for discussions and sharing of information if they were to use this teaching approach. It is therefore essential that school leaders create scheduled times for teachers to discuss and plan their lessons together (Canady & Rettig, 1995). Furthermore, team teaching can also become an extra load for teachers who already have so much to do. Another concern raised was that since teachers are individuals, creating a working environment that is conducive to team work may not be easy, as people are different. Even though team teaching is a technique that could potentially be used to manage large class sizes, its success depends on the cooperation and mutual relationship of the teachers, adequate classroom space, and the availability of facilities, teachers and resource materials. The general consensus was that the government needs to ensure that these resources are in place to assist schools to better manage large class sizes. Teachers need to be given the confidence to use this strategy. The challenge is for school leaders to support, mentor and guide classroom teachers to use appropriate teaching techniques (Kilburg, 2007).

#### **6.4.4 Collaborative Learning**

This study also revealed that school leaders are using learning approaches that would help in managing large class sizes. Collaborative learning is suggested as a learning technique that is used by classroom teachers to increase teacher–student interactions in large class sizes. As defined by Renkl, the technique involves having two or more students working together towards the same goal (as cited in Kaendler et al., 2014). This goal is achieved through group discussions in which representations of the findings or solutions are reported to class. Collaborative learning allows for easy access to successful teacher-student contact which could lead to an increase in the level of interaction between the two groups (Tabot et al., 2013).

Classroom teachers need to be assisted by school leaders to use collaborative learning since there is a wide range of techniques to choose from (Tabot et al., 2013). At the same time, it is essential that guided communication becomes a mechanism in aiding classroom teachers to use collaborative approaches to their advantage (Dehler et al., 2010). Participants explained that in using this learning approach, students are divided into either ability or random groups. One participating school has scheduled a block period for teachers within a subject department to help out in teaching a certain grade. Similarly, certain subject teachers with smaller student numbers are able to execute this strategy since they have the class room space to spread out the groups. As the participants observed, creating study groups is easier when the classrooms are bigger than the number of students. The space allows students to work or to spontaneously discuss without being disturbed by other groups and teachers to move around and interact with them.

Villa et al. (2010) add that students with positive leadership qualities can be trusted to lead discussions in groups and can become problem solvers and designers of their own learning when collaborative learning is applied. At the same time, since Papua New Guineans identify themselves through their culture or tribe (Lewis-Harris, 2012), there are similarities between collaborative learning and the way knowledge is imparted to the young traditionally (Guthrie, 2011). Group participation and presentation are ways that give confidence to young Papua New Guineans and allow them to develop a social bond with other students

(Lewis-Harris, 2012). Collaborative learning is therefore, an achievement motivation for PNG children (Nelson et al., 2006; Villa et al., 2010) since it serves as a tool in giving students confidence and self-esteem (Hill & Hill, 1990). However, though teachers are encouraged to use this learning approach as an aid to the management of class size, certain subjects with significant large classes are unable to use the method because of lack of classroom space and unavailability of classrooms. One participant added that dividing students into groups of less than five students in a group is unmanageable since there would be more groups to attend to.

Simultaneously, the challenge with collaborative learning or group study is that students need to learn to trust each other to work along well together because the lack of socio-cognitive relationship amongst groups can impede active and successful collaborative learning (Mullins et al., 2013). At the same time, students need to trust each other to share ideas and discuss solutions through problem solving. The relationship amongst students determines the success of collaborative learning. For this reason, a sound socio-cognitive relationship amongst students allows for effective participation in collaborative learning (Baker et al., 2013). One participant argued that even though collaborative learning helps in managing class size, some students rely on others to discuss and present group work on their behalf. He cautioned that the tendency to rely on other students needs to be carefully monitored to allow for fair assessment on students' participation. Teachers should ensure that students are spontaneous and active in their learning when using this approach in managing large class sizes.

#### **6.4.5 Community Support**

As stated by the respondents, apart from insufficient resources, inadequate facilities and teacher shortage, another impediment to the successful implementation of FEP, especially in managing large class sizes, is a lack of community support. The relationship that is shared between the school and its surrounding community is inter-reliant (Johnson & Kruse, 2009). This relationship is an advantage for teachers and especially students when the school is fully supported through community involvement both in human and material



resources (Bray, 2003). School leaders' views in this study demonstrate that a contributing factor to implementing the policy successfully is the support of community, and of organisations or individuals who are interested in the learning of the students; and especially of the parents (Jacobsen et al., 2011).

Participants from the boarding school considered that parents should help with supervising out of class activities on weekends, including cooking of students' meals. Henson (2012) affirms that parental involvement in such activities helps strengthen the school's relationship with its community, hence the support of the community can spread the weight of resourcing and at the same time enhance the volume, capacity and influence in the education of their children (Bray, 2003). Participants also thought that parents should help supervise students on field trips since the classes are too large for one teacher to manage on their own. Henson (2012) and Bray (2003) assert that community contributions in to sustaining this policy change are vital as they could encourage a positive teacher-student relationship that supports motivation and classroom teaching. Practical support by the community should also ease the amount of work teachers do, especially for out of class or out of school activities. With active community support teachers can be expected to implement the policy effectively, to educate their students well and, at the same time, strengthen the relationship that schools have with their community (Henson, 2012).

## **6.5 Summary**

Findings in this study reveal that the implementation of FEP in PNG has primarily increased student population in secondary schools, and the extent of its disadvantages outweighs its advantages. Firstly, even though the Free Education Policy provides access to school for more students (UNICEF, 2013) and upholds values of equality and fairness (Avalos, 2006), the findings reveal that school leaders are extremely challenged to effectively implement this directive which is supposed to guide the functions and existence of the schools (Cooper et al., 2004). Although policy changes are bound to happen at any time in any organisation

(Bell & Steven, 2006), these schools are ill equipped to accommodate large class sizes.

Secondly, being in the role of school leadership, the participants were aware that they need to be skilful people who aim to advocate change in order to progress (Marx, 2006) since the outmost role of school leadership is to improve the achievement of students in the school (Taylor & Cava, 2011). With the implementation of FEP, school leaders need to work alongside their subordinates to create change within the school by creating a working environment that is conducive to effective large class size management. However, even though school leaders set the path for the school by making deliberate plans, motivating, inspiring and making new things happen to move the institution forward (Hoyle & Wallace, 2005), inadequate school facilities, insufficient resource materials and shortage of teachers create setbacks in effectively implementing the policy.

Finally, the study reveals that the task of managing large class sizes demands a lot of time and hard work. Impediments to effective large class size management include the lack of facilities and resources, teacher shortage (Guy, 2009), teachers being overloaded, overcrowded classrooms, lack of community support, and the need to develop teaching and learning strategies that are applicable for large class size management. As a leadership team, the participants saw the need for collaborative decision making and the establishment of sound communication channels with subordinates (Hallinger & Heck, 2010) in order to implement the policy despite its drawbacks.

## **Chapter Seven**

### **Conclusion**

#### **7.1 Overview of the Chapter**

The implementation of the Free Education Policy (FEP) in secondary schools of Papua New Guinea brought both benefits and difficulties. The primary impact has been the significant increase in student population, creating class sizes of an average of forty-eight students. Since secondary school teachers are specialised and therefore take a specific number of students, they do not take the same number of students across the school. This study aimed to explore how school leaders perceive and implement the Free Education Policy and at the same time establish how classroom teachers are assisted in the management of large class sizes. I stated in the first chapter that this was an important area of research due to the significant increase in class size.

This chapter presents the conclusion of the study, in two parts. The first part provides a brief summary of the findings and gives light to the limitations that were encountered in the course of this study. The second part provides recommendations for future research into the impacts and resolutions in the management of large class sizes.

#### **7.2 Summary of the Findings**

The national government of Papua New Guinea established FEP in public and agency schools that are funded by the government. The significant increase in secondary schools creates challenges for classroom teachers due to the lack of resources, overcrowded classrooms and work overload. Despite being hindered by these issues, classroom teachers are anticipated to assist grades ten and twelve students pass national examinations. To accomplish these responsibilities, school leaders need to assist and support classroom teachers manage their large class sizes successfully.

This study has shown that the implementation of the Free Education Policy can have a powerful impact on the management of class size; and its success will depend on how school leaders communicate, make decisions, mentor, and generally organise the daily activities and responsibilities of classroom teachers. To move the school forward, school leaders affirm that they need to work collaboratively with classroom teachers in addressing these issues in order to manage large class sizes confidently. Sound communication avenues and reciprocal relationships must be established and developed between these two groups in order to engage students in active learning. The issues of limited resource materials, inadequate facilities, and teacher shortage are impediments to effective large class size management. The amount of time teachers have in attending to students' needs is also identified as a contributing factor to ineffective large class size management.

In addition, one thing that I found typical amongst participants in this study when analysing the collected data was that ninety percent of the participants had not responded directly to the given questions. I believe that they felt they needed to justify the influences and impacts which had contributed to their responses. The participants said repeatedly that they were greatly challenged by this changed policy

### **7.3 Limitations of the Study**

There were certain limitations in carrying out the study. Firstly, one of the limitations for this study was time. I was unable to use more than ninety minutes for each interview due to the busy schedule that school leaders already have which meant that I had to work around their schedule. As a result, most of the interviews were done late in the afternoon when people were tired and a few having to travel home. The scope of my study, therefore, allowed me to interview a total of only ten participants from two schools.

Secondly, it was a challenge obtaining sufficient information from prior research into school leadership and classroom teachers especially in communicating how to manage class size hence it was not easy to present information based on that. I

established that much research has been based on the quality of education versus class size (Lopez, 2007; Achilles, 2003; Finn et al., 2003). However, this gave me the opportunity to use collated data from the studies including those cited in this paragraph, to develop and present my findings on the shared experiences of school leaders in assisting classroom teachers in the management of large class size.

Furthermore, certain participants did not seem to understand the questions immediately so I had to reiterate. The prompt questions also helped me to keep participants on track. There were instances where participants used improper language because they were frustrated with the amount of work they were expected to do with limited resources and lack of government support. The coarse language used has been omitted from this study.

Finally, this study was driven by my desire to identify how school leaders can be of assistance to classroom teachers in the management of the large class sizes which have resulted from FEP. School leaders in this study demonstrated that they are challenged by the significant increases in class size and therefore are doing what they are capable of within their means. Having been part of a school leadership team, I understand the amount of work that classroom teachers have to deal with on a daily basis. A significant increase in class size gives classroom teachers more work but less time. With large class sizes, the level of teacher-students' interaction becomes minimal, due to limited time and resources and overcrowded rooms. I am wary of the fact that in large classes, teacher-student interaction can be minimal if school leaders are not assisting classroom teachers through communicating this change in policy. It was through this study that I was able to gain a greater understanding of the influences and impacts of FEP in the management of large class size.

## **7.4 Further Research**

My study involved a small number of participants in the national capital district of Papua New Guinea and therefore the findings may not be generalisable. Due to the limitations of a Master's thesis, I have provided insights into the impacts of

the Free Education Policy in PNG and the challenges it has raised in the management of large class size in only two secondary schools in the country as perceived by school leaders in these two schools. However, I believe that the issue of the impacts of this policy offers a huge area and potential for future research, especially in rural secondary schools, and into how school leaders can better assist classroom teachers in effective large class size management. Therefore, I hereby would like to suggest possible areas that I think would be of value to pursue as future research studies in PNG secondary schools:

1. Since my study looked at school leaders' perceptions of the impacts of FEP in the management of large class sizes, I believe that an extensive research project with school leaders from a larger number of schools would provide better and very constructive information regarding typical setbacks in the implementation of FEP.
2. Study could be done into how other stake holders – students, classroom teachers, the parents and community, ~~or~~ the school board – perceive this change in policy. Even in the small amount of consultation carried out, prior to the implementation of this policy, none of those studies included school leaders. Consultation with school leaders was, however, carried out in the change of OBE curriculum (Nanol, 2013).
3. I used qualitative research, specifically using interviews as my mode of data collection; case studies or surveys are other possible approaches that could be applied in order to attain a wider understanding of the effects of the implementation of FEP.

## **7.5 Recommendations**

The fundamental outcome to emanate from this study is that the implementation of the Free Education Policy has created more problems than advantages in the effective management of large class sizes. In the course of data collection, the participants gave suggestions and recommendations that could be of benefit in assisting classroom teachers effectively enact this policy.

Firstly, the government should have carried out a full feasibility study prior to the implementation of this policy into how it will impact the schools, the teachers and most importantly the students. Given that FEP had and has the potential of creating a substantial increase in student population, there should have been adequate infrastructure, resource materials and teachers in place before schools were required to implement the policy. The government should currently be checking on what is happening on the ground, including problems the schools are facing. The policy makers should look at the needs of the teachers and schools and assist them because, as noted, the subsidy covers only the head count of students. FEP does not consider whether the institution is a boarding or day school, needs power or not to run the school, needs more ancillary staff, or has sufficient resources to operate.

Creating better incentives for teachers will encourage more teachers into the workforce. At the same time, on-going staff development programmes for teachers will aid teachers in class size management. School leaders need the time and space to effectively assist classroom teachers to manage large class sizes successfully. Having a standard limit of forty per class size in secondary schools would help teachers to manage class sizes effectively. However, if class sizes cannot be decreased, teacher aide positions should be created to assist teachers with the workload (e.g. preparing teaching aids, marking books and tests, and other teaching preparation duties). Teacher aides and laboratory technicians would allow classroom teachers to better manage large class sizes.

Thirdly, there has been no proper evaluation carried out on past policies and some of them are still changing with little analysis. The structure is changing and the curriculum is also being changed, yet FEP is not part of the structure or the curriculum. Since all these changes are happening simultaneously, teachers have no choice but to pay heed to them. To implement FEP effectively, the participants also suggested that the level of the school should be increased in order for more positions to be created thus permitting more optional subjects for students and reducing class size. At the same time, grades seven and eight should be included in the secondary school structure to allow for an easy flow of content cover.

Many parents are happy with the government's implementation of FEP; however, neither the government nor parents see the problems teachers are faced with. Parents and the government should not rely on the "teacher-student ratio" but rather they should pay attention to the "class size teacher ratio". This is because secondary school teachers are specialised teachers. The number of students and classes they take depends on the number of students who have opted to take the subject.

My personal recommendation would be that due to the limited resources, the provincial education board in each province should create "shift classes". Shift classes mean that grades nine and ten students could attend classes in the morning and grades eleven and twelve attend classes in the afternoon. This is not a new concept in Papua New Guinea. However, the issue needs careful analysis and its strengths and weaknesses identified. The focus would be on quality time and not on quantity time, even though work could be given as out of class work for students. Applying shift classes could alleviate teacher shortage, insufficient classroom and building space, heavy workloads and over-large classes, if the same teachers teach in both the morning and afternoon.

## **7.6 Final Remarks**

What would be the best solution for school leaders and classroom teachers to ameliorate the drawbacks of the Free Education Policy? While FEP has been implemented in the elementary and primary schools in the last twelve years, its impact in the secondary schools has been more noticeable than that experienced in the primary schools. This is because, firstly, secondary school teachers are specialised in one or two subjects and therefore teachers take a number of classes depending on the number of students who have opted to take the subject; and secondly, the students sit for two separate National Examinations at the end of grades ten and twelve (DoE, 2011). Therefore not only do teachers have to impart knowledge to the students in these large class sizes, they also have to coach them for these National Examinations (Bray, M. 2007).



Therefore the survival of an effective implementation of the Free Education Policy will depend entirely on the very existence of the present government as its introduction was seen as a political directive and things could change with a change of government. Finally, since this policy was implemented without wide consultation, its effective implementation demonstrates a weakness for discontinuities if schools and school leaders are not fully resourced to help classroom teachers effectively manage large class sizes. In its current form such a policy cannot be seen as a long-term solution for the human resource problems of the country and if for some reason this policy discontinues then the biggest losers will be the students.

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# Appendices

## Appendix A Ethics Committee's Approval for Research

Dean's Office  
Faculty of Education  
*Te Kura Toi Yangata*  
The University of Waikato  
Private Bag 3105  
Hamilton, New Zealand

Phone +64 7 838 4500  
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THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Waikato*

### MEMORANDUM

**To:** Roddy Abady  
**cc:** Dr Bill Ussher  
Dr Karen Barbour  
**From:** Dr Nicola Daly  
Chairperson (Acting), Research Ethics Committee  
**Date:** 3 October 2014  
**Subject:** Supervised Postgraduate Research – Application for Ethical Approval (EDU080/14)

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Thank you for submitting the amendments to your application for ethical approval for the research project:

**The impact of the Papua New Guinea free education policy on the school executive's decision making in the management of class size**

I am pleased to advise that your application has received ethical approval.

Please note that researchers are asked to consult with the Faculty's Research Ethics Committee in the first instance if any changes to the approved research design are proposed.

The Committee wishes you all the best with your research.

Dr Nicola Daly  
Chairperson (Acting)  
Research Ethics Committee

## **Appendix B      Letter seeking approval from Department of Education – NCD to conduct research**

**Title:** *The impact of the Papua New Guinea free education policy on the school executive's decision making in the management of class size.*

The Education Director / Standards Officer  
N.C.D Education Department  
P. O. Box 446, Waigani  
Port Moresby- National Capital District  
Papua New Guinea

**Subject:** Seeking permission to conduct research in two secondary schools in NCD

Dear Sir/ Madam,

I am a female Papua New Guinean student who is currently enrolled in the Masters of Educational Leadership programme at the University of Waikato in Hamilton, New Zealand. As part of the course, I am required to undertake a home-based research study to complete my master's thesis. That is why I am seeking permission to conduct my research in at least two secondary schools in NCD.

**The topic that I wish to research is:** *The impact of the Papua New Guinea free education policy on the school executive's decision making in the management of class size.*

As a secondary school teacher myself, I am very much interested in the findings of the experiences of those in the leadership roles in the schools, especially with regards to decision making in the management of class sizes. Significant findings

gained through this research study can be of use to the department as well as the schools. I should be able to provide you with a summary of the significant findings of the research which may provide insights into the practice of leadership roles in communicating and developing a better understanding in the changes in policy and at the same time examine how these changes impact on the decisions made by the school's executive team.

As part of this investigation, I would like to interview members of the schools' executive teams as potential participants in this research. I intend to carry out two interview sessions; one with at least four to five HODs in a focus group interview and the other with a deputy principal or the principal participating in the semi-structured interview. This research intends to explore, through interview, your view(s) on how this change in policy has impacted on their liaisons with the teachers within their different subject departments in managing class size and how this has impacted also on decisions made in regards to school practices.

The study is approved by the Faculty of Education Ethics Committee of The University of Waikato. All information and collected data will be strictly confidential and all effort will be made to safeguard the privacy and confidentiality of the participants in this research. Although all efforts will be made to maintain confidentiality, it cannot be guaranteed. At the same time, permission to do this study has been sought and approved by the Faculty of Education Research Ethics Committee, as this is a requirement by the University of Waikato Ethical Conduct in Human Research and Related Activities Regulations, 2008.

This research study is under the supervision of Dr Bill Ussher, here at the University of Waikato. Should you have concerns or need further clarifications please feel free to contact me or if it is of a wider concern please do contact my supervisor. Dr Bill Ussher can be contacted via email, using this address: [bussher@waikato.ac.nz](mailto:bussher@waikato.ac.nz).

Therefore, I hereby seek permission to do this research at these schools between the 6th and the 10th of October, 2014. Please let me know through email if this is possible.



An RSVP would be very much appreciated.

Yours sincerely,

Roddy ABADY

Email: ra93@students.waikato.ac.nz

Masters of Education

Research Student

cc: Principal \_\_\_\_\_ Secondary School

cc: Principal \_\_\_\_\_ Secondary School

## **Appendix C      Letter seeking approval from Principal to conduct research**

**Title:** *The impact of the Papua New Guinea free education policy on the school  
executive's decision making in the management of class size.*

The Principal

\_\_\_\_\_ Secondary School

P. O Box

Port Moresby

National Capital District

Papua New Guinea

**Subject:** *Seeking permission to conduct research at your institution*

Dear Sir/ Madam

I am a female Papua New Guinean student who is currently enrolled in the Masters of Educational Leadership programme at the University of Waikato in Hamilton, New Zealand. As part of the course, I am required to undertake a home-based research study to complete my master's thesis. That is why I am seeking permission to conduct my research at your school.

The topic that I wish to research is: The impact of the Papua New Guinea free education policy on the school executive's decision making in the management of class size

As a secondary school teacher myself, I am very much interested in the findings of the experiences of those in the leadership roles in the schools, especially with regards to decision making in the management of class sizes. Significant findings gained through this research study can be of use to your school. I should be able to provide you with a summary of the significant findings of the research which

may provide insights into the practice of leadership roles in communicating and developing a better understanding in the changes in policy and at the same time examine how these changes impact on the decisions made.

As part of this investigation, I would like to interview members of your school executive team as potential participants in this research. I intend to carry out two interview sessions; one with at least four to five HODs in a focus group interview and the other with a deputy principal or the principal participating in the semi-structured interview. This research intends to explore, through interview, your view(s) on how this change in policy has impacted on their liaisons with the teachers within their different subject departments in managing class size and how this has impacted also on decisions made in regards to school practices.

The study is approved by the Faculty of Education Ethics Committee of The University of Waikato. All information and collected data will be strictly confidential and all effort will be made to safeguard the privacy and confidentiality of the participants in this research. At the same time, permission to do this study has been sought and approved by the Faculty of Education Research Ethics Committee, as this is a requirement by the University of Waikato Ethical Conduct in Human Research and Related Activities Regulations, 2008.

This research study is under the supervision of Dr Bill USSHER, here at the University of Waikato. Should you have concerns or need further clarifications please feel free to contact me or if it is of a wider concern please do contact my supervisor. Dr Bill Ussher can be contacted via email, using this address: [bussher@waikato.ac.nz](mailto:bussher@waikato.ac.nz).

Therefore, I hereby seek permission to do this research at your school between the 6<sup>th</sup> and the 10<sup>th</sup> of October, 2014. Please let me know through email if this is possible.

An RSVP would be very much appreciated.

Yours sincerely,

Roddy ABADY

Email: ra93@students.waikato.ac.nz

Masters of Education

Research Student

cc: NCD Education Director – Ms. G. NAIG

cc: NCD Standards Officer – Secondary – Mr. B. DAGEMBA

## **Appendix D      Participants' Information Sheet**

**Title: The impact of the Papua New Guinea free education policy on the school executive's decision making in the management of class size.**

Student Researcher: Roddy ABADY

Supervisor: Dr. Bill USSHER

### **My background:**

My name is Roddy ABADY and I have a Diploma in Secondary Teaching from the University of Goroka and a Bachelor's Degree in Education from Divine Word University, both institutions in Papua New Guinea. I have just completed my Post Graduates Diploma in Educational Leadership from the University of Waikato and I am continuing into a Master's Programme in the Faculty of Education. Prior to this study I was teaching in different secondary schools in the National Capital District, as well as in Madang, New Ireland and the Morobe Provinces. I have twenty-five years of teaching experience; eight of which as a Head of a Subject Department.

Therefore, my experiences and in studying 'Educational Leadership' here at the University of Waikato, have motivated me to research the free education policy; how teachers are responding to this change in policy and especially how this change has impacted on the decisions you make as one who is in the role of leadership, especially on how teachers should be managing these large class sizes.

### **The research:**

The topic that I am researching is: The impact of the Papua New Guinea free education policy on the school executive's decision making in the management of class size.

The study aims to explore your experiences as persons in leadership roles; how you communicate this change in policy to those you lead (other teachers) and in managing this change. The study also entails in investigating how this change in policy has impacted on the decision making, in alignment with the school policies and school practises. It is anticipated that through your shared experiences, this research will be able to highlight the challenges you face and articulate how you overcome these challenges as this change in policy is a directive from the National Government. As a secondary school teacher myself, I am very much interested in the findings of the experiences of those in the leadership roles in the schools, especially with regards to decision making and the management of class sizes.

**Your part in this study:**

The principal and or deputy principal participants in this study will take part in a semi-structured interview. This interview should not take more than an hour. The HODs will participate in a focus group interview and that session should be less than one and a half hours. Both sessions will be held in the vicinity of the school at a mutual agreeable time and venue. Participants wishing to recheck group and or individual notes and themes for accuracy from the interview, must let me know so that I can be able to send you a copy of the write up. This is an opportunity to hear your stories and experiences as implementers of this educational policy change.

**Confidentiality and ethical conditions:**

The Faculty of Education Research Ethics Committee as required by the University of Waikato Ethical Conduct in Human Research and Related Activities Regulation, 2008, has approved this project. However, your participation in this project will depend on your consent through voluntarily completing and signing the consent form. With your permission the interview you participate in will be recorded with the aid of a 'digital voice recorder'. It is therefore of utmost importance that you do not disclose the names or the identity of other members who participate especially in the 'focus group' interview.

**Recording of data code:**

Recording of collated data taken from the focus group interview will be recorded as T1 = teacher 1, T2 = teacher 2, T3 = teacher 3. Responses from the semi structured interview participants will be recorded as SL1= School leader 1, SL2 = School leader 2 and so on. This is to ensure that confidentiality and your privacy is safely guarded.

**Publication:**

I will firstly, submit the written report on this research study to the University of Waikato as a requirement for the completion of my Masters of Leadership programme. The findings will also be shared through academic presentations and seminars and publications in academic journals. Upon completion, a copy may be sent to you via email, should you request for one.

**Supervisor:**

I will be supervised by Dr. Bill USSHER, a Senior Lecturer in the Faculty of Education, University of Waikato. If you have any concerns about the research you may contact him via email on: [busssher@waikato.ac.nz](mailto:busssher@waikato.ac.nz). I can also be contacted via email on: [ra93@students.waikato.ac.nz](mailto:ra93@students.waikato.ac.nz).

## Appendix E      Consent Form

**Title: The impact of the Papua New Guinea free education policy on the school executive's decision making in the management of class size.**

☐ i) Principal,      ☐ ii) Deputy Principal      ☐ ii) Heads of Departments

### Consent Form

It is very important that you read each statement carefully before you put a tick in the box(s). Your ticking of the box(s) will indicate that you have clearly read and understood the activities of the research and that you give consent to participate. Your total consent will only be acknowledged when you sign at the bottom of this form.

- ☐ My participation in this study is totally voluntary and therefore, I have the right to withdraw any time before or during the interview.
- ☐ My name and the name of my school will not be in any way be identified or published in this research.
- ☐ I am aware that any information collected or used in this study will be destroyed after five years of when this study is complete.
- ☐ All information that I give for this study will only be used for the purpose of this study, published papers and presentations.
- ☐ I will not in any way disclose names of other persons or individuals who participate in this study.



☐ I am aware that any information given as a response by any participant must be treated with respect and anonymity.

☐ I hereby give full consent to participate in this study as I have read and understood the set guidelines.

Name:\_\_\_\_\_ School:\_\_\_\_\_

Signed:\_\_\_\_\_ Date:\_\_\_\_\_

## **Appendix F          Semi-Structured Interview Questions**

- **SEMI-STRUCTURED INTERVIEW QUESTIONS**

These are the questions that I will be using to interview the principal(s) and or deputy principal(s) in the semi-structured interviews. The participants will be interviewed as individuals.

Hello and welcome to this interview. The purpose of this interview is to be able to gather your experiences as leaders in the implementation of the free – education policy, how you communicate this change in policy to the teachers in managing class size because they are large. This interview also intends to be made aware of the challenges you face in making decisions in your role as the principal/deputy principal of the school.

At this point I would also like to reiterate the following rights that you have as participants in this study. You have the right to decline to answer any particular question. If you wish to withdraw from this study, you may do so now or at any time during the session.

### **1. How has this change in policy impacted on:**

#### ***1.1 The school policy?***

- a) Did you have to make changes in school policies to accommodate this change in policy?

#### ***1.2 The decisions that you make as a principal of the school?***

- a) As this is a National Government directive, what decisions did you have to make that your felt were just because you had the students' interest at heart?

#### ***1.3 The school practices?***

- a) Did you have make drastic changes to the school practices or had to include or drop certain practices to cater for this change?

**2. What is your perspective on the change in policy to ‘Free Education’?**

- a) What would be the total intake of students for this year and how many students would there be per class?
- b) When you compare that figure to what you had before the free-education policy, what was it like?
- c) How would you describe your stand in this change of policy since it is a directive from the National Government? How do you feel about this?

**3. What are the main challenges that teachers are faced with in dealing with class sizes?**

- a) What would have been the most difficult decisions you have had to make in regards to assigning what teachers teach which class(s)? Why?
- b) How have you dealt with these challenges?
- c) What would be the main challenges that teachers face and how do they deal with them?

**4. Are there discussions held with HODs or the teachers in general about the learning approaches that teachers are using for example like socio-educational or motivational methods?**

- a) Do you discuss with the HODs or even the teachers about what teaching approaches they could use to manage these large class sizes? Why/Why not?
- b) Do you think it is important that teachers are assisted in responding favourable since it is really not the students’ fault that there are so many in one class?

**5. How are you as the principal/deputy helping teachers to respond constructively to this change in policy since it is a directive from the National Government and that as a school, you cannot change?**

- a) Are teachers responding constructively to this change in policy and the increase in class size?
- b) Would you be in apposition to assist teachers to respond favourably to this change in policy? If so how/ if not why?

***Prompts***

Can you elaborate on.....?

Why do you think this is so that...?

What do you mean when you say...?

What would be an example of...?

How is it...?

Why is it...?

How do you feel?

How does that affect...?

**Note:** Not all lead on and prompt question will be used. It will depend largely on the given responses of the participants.

## **Appendix G      Focus Group Interview Questions**

### **• INTERVIEW QUESTIONS –FOCUS GROUPS**

These are the questions that I will be using to interview the heads of department in the focus group interview. The participants will be interviewed as a group and there will be only one group per school.

Hello and welcome to this interview. The purpose of this interview is to be able to gather your experiences as leaders in the implementation of the free – education policy, how you communicate this change in policy to the teachers in managing class size because they are large. This interview also intends to be made aware of the challenges you face in making decisions in your role as the head of department in having to lead a team of teachers.

At this point I would also like to reiterate the following rights that you have as participants in this study. You have the right to decline to answer any particular question. If you wish to withdraw from this study, you may do so now or at any time during the session.

#### ***1. How has this change in policy impacted on:***

- i) Your department policies?
- ii) The decisions that you make as a HOD of the school?
- iii) The school practices?

#### ***2. What would be the range of class size from year nine to twelve?***

- a) What would be the approximate number of students per class, per teacher?
- b) Would that be the number in the lower secondary or is that for both lower and higher secondary?

**3. *Being in charge of a Department, which means having to be responsible for a number of teachers within your department, how do you communicate this change in policy to them?***

a) When you have departmental meetings, do you discuss how teachers should be handling these class sizes? If so how is this done?

**4. *How are you as HODs helping teachers to respond constructively to this change in policy since it is a directive from the National Government and that as a school, you cannot change?***

a) I know you do not have any choice as to how many students should be in a class, (as this is a National Government directive) and I understand the amount of workload that is involved, however in the middle of this, there are the students. How do you assist those in your team or department to respond constructively to this change in policy?

**5. *Do you find your teachers to be receptive to your suggestions and are they willing to use them, especially teaching and learning strategies?***

**6. *As a team leader, what are the biggest challenges you are faced with within your department in catering for teaching these large classes and what recommendations have you either used or should hope to use to help you in tackling these challenges?***

### ***Prompts***

Can you elaborate on.....?

Why do you think this is so that...?

What do you mean when you say...?

What would be an example of...?

How is it...?

Why is it...?

How do you feel?

How does that affect...?

**Note:** Not all lead on and prompt question will be used. It will depend largely on the given responses of the participant